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THE TENTH
ANNUAL REPORT AND TRANSACTIONS
OF THE
ROYAL SOCIETY
FOR THE
PROMOTION AND IMPROVEMENT
OF THE
GROWTH OF FLAX IN IRELAND;

WITH

AN APPENDIX,

TREASURER'S STATEMENT OF ACCOUNTS,

AND

LIST OF SUBSCRIPTIONS AND DONATIONS,

For the year ending 31*st October,* 1850.

BELFAST:
PRINTED BY FRANCIS D. FINLAY,
CALENDER-STREET.
1850.

△
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ROSCREA BRANCH.

RULES OF THE SOCIETY.

1st.—That all persons paying a subscription of *one guinea,* annually, be constituted ordinary members.

2d.—That the Society, besides its ordinary members, do consist of a President, Vice-Presidents, a General Committee of Management, a Treasurer, and a Secretary.

3d.—That the Treasurer and Committee of Management be annually elected, by a general meeting of the Society, from among its members.

4th.—That the Society do meet in the month of November, of each year, to elect officers, hear reports, make or alter rules, and transact such other business as may come before it.

5th.—That the General Committee do meet on the last Wednesday in each month, for the transaction of the ordinary business of the Society, three members required to constitute a quorum; the Secretary to call special meetings, at the request of three members of the Committee, who may judge it expedient to do so.

6th.—That, as the utility of this Society will be much promoted by a number of persons taking an interest in it, it will be accessible to all, on the payment of one guinea, annual subscription; but, as the funds so procured would be, most probably, inadequate to its management, donations shall be solicited from persons who can afford such sums as will enable the contemplated objects of the Society to be effectually carried out; and it is confidently expected, that, for an object of such national importance, such contributions will be given, as will put its success beyond a doubt, as far as the means of working it are concerned; and that the zeal and discretion of its managers will secure that benefit for the undertaking which its importance demands.

7th.—That every one who becomes a member shall continue to be considered as such, and his subscriptions justly due to the funds of the Society, until he gives notice, in writing, to the Secretary, of his intention to withdraw.

8th.—That no member, in arrear two years or more, shall be permitted to take part in any debate of the Society, or give a vote upon any question, until such arrear be paid up.

9th.—The Treasurer shall receive all monies belonging to the Society, and lodge same in the Bank which may be appointed to keep the accounts, when it may accumulate to the sum of £50 in his hands. He shall also draw cheques, and pay such sums as may be voted by the General Committee, at its meetings, but not without its authority; and said cheques shall be signed by the Chairman of the meeting, the Treasurer adding also his own signature. He shall also furnish a yearly statement of accounts, and report monthly receipts and expenditure, at the General Committee meetings, shewing a list of members whose subscriptions remain unpaid, at least once a-year.

10th.—The Secretary shall conduct the correspondence of the Society, keep the books of it and of the Committee, take charge of all matters connected with their proceedings, give notice of meetings to those entitled to them, and attend to any duties the Committee may direct.

11th.—All new rules, or alterations of the present regulations, to be made at the annual meeting of the Society; notice of such rule or alteration to be proposed having been given to the Committee, at least a fortnight previous to the general meeting.

12th.—That this Society shall encourage Branches, in different districts, for the purpose of forwarding its objects,—to correspond, and otherwise co-operate with the General Committee; the President of each of the Local Branches to be an *ex-officio* member of the General Committee, and to be entitled to the regular notices of meetings,—each Branch to consist of subscribers to the Society only.

13th.—That, in order to afford every facility to Local Farming Societies and Branches, in the South and West of Ireland, for obtaining the services of the Flax Society's Agriculturists, the following be the regulations in future:—

First.—Every Branch or Local Farming Society, as aforesaid, which shall incorporate itself with the Flax Society, by contributing to it not less than *Ten Pounds*, annually, shall be entitled, while it so contributes, to the service of a Flax Agriculturist, for two weeks in the sowing, and three in the pulling seasons; the salary of the Agriculturist, and his travelling expenses, to the district, to be defrayed by the Flax Society, but his expenses, while occupied within the bounds of the district, to be defrayed by the Local Society or the individuals employing him.

Second.—The Flax Society will send to the Local Society, so qualifying, one of the Agriculturists, during the Winter, if required, to select and prepare land for the flax crop.

Third.—A sufficient supply of the Society's publications will be furnished, free of charge.

Fourth.—An additional week of the Agriculturist's services will be given, for every additional *two pounds* subscribed by the Local Society.

14th.—That, in case of individual landed proprietors being desirous of introducing flax culture, in a district where there is no Local Society, or where it has not qualified, a subscription of not less than *one guinea* to this Society will entitle each individual to a certain time of the Agriculturist's services, to be regulated by the Committee of the Flax Society; and that, in all such cases, the expenses of the aforesaid Agriculturist, to and from the district, and while engaged on the estate, shall be defrayed by the landed proprietor so requiring him.

ROYAL SOCIETY

FOR

THE PROMOTION AND IMPROVEMENT

OF THE

GROWTH OF FLAX IN IRELAND.

(From The Northern Whig, of the 30*th November,* 1850.*)*

The tenth annual meeting of this Society was held yesterday, in the Society's rooms, Commercial Buildings. It was cheering to see so large an attendance, not only of gentlemen belonging to this town and neighbourhood, but of parties from a distance, all of whom manifested a deep interest in the proceedings of the Society. Among those present, we observed the following :—Earl of Erne, Earl of Roden, Lord Dufferin, the Lord Bishop of Down, Connor, and Dromore; Viscount Jocelyn, M.P.; Sir R. Bateson, Bart., Belvoir-park; Sir J. M. Stronge, Bart., Tynan Abbey; William Sharman Crawford, M.P.; Alexander Shafto Adair, M.P.; Robert J. Tennent, M.P.; Richard Ker, M.P.; Edmund M'Donnell, D.L., Glenarm Castle; R. B. B. Houston, D.L., Orangefield; John M'Neile, D.L., Parkmount; John F. Ferguson, D.L.; John Temple Reilly, D.L., Scarva House; J. Shouldham, J.P., High-Sheriff of County Longford; J. S. Crawford, J.P.; James Agnew, J.P., Cairncastle Lodge; Thomas Greg, J.P., Ballymenoch; Robert Percival Maxwell, J.P., Groomsport House; Andrew Mulholland, J.P.; S. K. Mulholland, J.P.; F. Filgate, J.P., Hillsborough; John Hancock, J.P., Lurgan; C. G. M. Skinner, J.P., Dundrum; John Andrews, J.P., Comber; Thomas M. Birnie, J.P.; John Thomson, J.P., Lowwood; Wm. Coates, J.P.; Wm. Bell, J.P., Abbeyleix, Queen's County; R. F. Gordon, J.P., Craigdaragh; H. Crace, Agent to the Earl of Lonsdale, Esqrs.; Revds. Dr. Murphy, Thomas Knox, F. Blakely, and J. Killen; Professors Hodges and Hancock; Captain Kennedy, Major Houghton, J.P.; Spencer Percival, Finnebrogue; Jonathan Richardson, Ingram; Robert M'Kibbin, M.D.; William G. Andrews, James Campbell, John Herdman, John Charters, Richard Niven, Richard Hull, John Borthwick, William Dargan, John Hind, John Birney, James Malcolm, Charles Duffin, A. Bernard, A. Koch, —— Lyle, Derry; James Grimshaw, John Preston, John Owden, R. Adams, Coleraine; David Connor, John Roberts, William Pirrie, Robert M'Adam, James Orr, M.D.; John Lamb, John Finlay, Jacob Bell, Alexander Dickson, Belturbet; Alexander Davison,

B

John Hunter, jun.; Victor Kennedy, Thomas M'Cullogh, Robert Roddy, Jonathan J. Richardson, John M'Master, W. B. Pugh, Leeds; John Turnley, Drumnasole; William Valentine, William Steen, Richard Davison, Edward Walkington, Michael Andrews, Robert M'Clelland, Wm. Ewart, jun., James Hart, Francis Hull, Henry S. Crawford, Samuel Vance, William Gamble, James Standfield, Isaac J. Murphy, —— Beggs, London; James Lemon, Adam Howie, Richard Robinson, J. Fiers, Esqrs., &c., &c. Some specimens of flax, &c., were arranged on tables for the inspection of the meeting. The following is a list of the chief articles :—Flax, steeped on Schenck's patent system, both scutched and hackled, from the Cregagh concern, County Down ; Latimerstown, County Wexford ; Dunmanway, County Cork ; Lord de Vesci's establishment, Abbeyleix, Queen's County ; and from Messrs. Marshall, Leeds, the latter having been scutched by Messrs. M'Adam Brothers' new machine; samples of flax steeped in the ordinary way, from Mr. O'Brien, County Cork; the Earl of Courtown, Gorey, County Wexford ; and Mr. White, Broughshane. The latter had produced the enormous yield of 70 stones 7lbs. to three and a-half roods Irish, and sold at 12s per stone, being at the rate of eighty-one stones per Irish acre, value 48*l*. 12s—one of the most valuable crops on record. It had been grown from Riga seed, and was managed under the advice of Mr. O'Hara, one of the Society's agriculturists. Samples of prime home-saved seed were shewn from Mayo, Cork, Down, and Wexford ; and from Yorkshire, by Messrs. Marshall. There were also specimens of boiled yarns, unbleached, bleached, and dyed threads, and bleached lawns and linens made from the patent steeped flax. Some bleached flax, prepared by Messrs. W. Orr & Co., of Glenalina, was shewn. Much interest was excited by samples of the new fabrics of cords and velvets, made from flax yarn, and sent by Mr. Astley, the inventor. It is hoped that this manufacture may be taken up in Belfast, as it appears that these fabrics can be made cheaper than the corresponding kinds from cotton, and would be likely to command a large sale. A sample of flax, as prepared on Donlan's dry system, was shewn, and presented a most unfavourable contrast with the beautiful specimens of steeped flax.

The Earl of Erne occupied the Chair.

The Chairman said that he had great pleasure in attending the meeting, and presiding over it, though he regretted very much that their Noble President was not present, because he thought that there was no one in the country more anxious to do everything in his power to promote the objects and interests of the Society than Lord Downshire. He was rejoiced to hear from the Secretary that the Society was in a flourishing condition, and he hoped that it would continue so, because there was no other Society in Ireland more conducive to the general welfare of the country. He had also been informed that several branch Societies were about to be established in different parts of Ireland, and, if it might not be considered presumptuous in him, he would venture to give a little advice to the patriotic gentlemen who were engaged in the work. He had himself taken great interest in the growth and cultivation of flax in Ireland, and had at present on his property in the County Donegall between 300 and 400 acres of flax. He would say that farmers should be very cautious for the first year in growing flax, because it was one of the tenderest plants that could possibly be. The first thing was to teach the farmer how to grow it, and to point out to him the best sort of ground for its cultivation, for, if the ground were too rich, it would not answer; and, if too poor, it would be as bad. Therefore, a very great difficulty to its cultivation arose from persons unaccustomed to grow this crop not knowing the proper ground for it. Farmers should be careful in selecting a proper soil, in the first place; the second step necessary was to get good flaxseed; and the third was to have proper, and, he would say, honest, persons to purchase the flax from them. Because, in the North, they got large prices for their flax, persons in other places imagined that they had nothing to do but to grow that crop, and get the same prices; but all was not gold that glittered. These parties should be cautious lest they burned their fingers, and go cautiously to work, by not sowing too great a breadth at first. He had lately received a letter on this subject from his agriculturist, a man who understood well the growing of flax. [His Lordship then read an extract from the letter, corroborating his statement.] Now, he did not want to throw any damp on the cultivation of flax, but he wanted those patriotic gentlemen who were about establishing the Societies to which he referred to give due consideration to the matter. He hoped and trusted that the cultivation of flax would be one of the means of working out the regeneration of Ireland; and they would, on this account, and because he had the thing so much at heart, excuse him for having so far trespassed on them.

Mr. MacAdam said that, before reading the report, he wished to mention that, a few days since, he had received a letter from Lord Downshire, in which his Lordship expressed his extreme regret that he could not attend their meeting, and take his place as President of the Society, in consequence of being in England; and his Lordship requested that he (the Secretary) should state so. The following is the report:—

TENTH ANNUAL REPORT OF THE COMMITTEE TO THE ROYAL SOCIETY FOR THE PROMOTION AND IMPROVEMENT OF THE GROWTH OF FLAX IN IRELAND.

At the close of the tenth year of the Society's labours, your Committee have again to lay before you a detailed report of their operations, in carrying out the objects of the Society, since the last annual meeting. In so doing, they are happy to be in a position to congratulate you on the satisfactory state of the Society's affairs. In their last report they shewed that many circumstances had concurred to augur a favourable progress towards the great ends which the Society has in view; and they are now enabled to confirm the opinion then expressed, and to direct your attention to the cheering prospects before them. They feel assured that you will pardon a repetition of former statements, where it may be necessary to revive them, as, from the importance which attaches to the causes of the Society's formation, they cannot be too urgently impressed on the public.

CONTINUED AID FROM GOVERNMENT.

In the last two annual reports, your Committee had to acknowledge the timely assistance afforded the Society by the Government, on the especial recommendation of the Lord Lieutenant, by granting two sums of £1,000 each in aid of the operations of 1848 and 1849, in certain Counties of Munster and Connaught. Owing to the distressed condition of these districts, and the inability, in many cases, of the landed proprietors to bear the expense of maintaining the Society's agriculturists, your Committee, soon after the last annual meeting, laid a renewed application before the Lord Lieutenant, and, through his Excellency's kind influence, again obtained a third grant of £1,000, under the provisions of the Act 11 and 12 Vic., chap. 115, allocated, in certain proportions, for the practical instruction of flax-growers, in the Counties of Cork, Kerry, Clare, Limerick, Tipperary, Galway, Mayo, Sligo, Leitrim, and Roscommon. The greater part of this sum has been expended, in the manner required, in the different Counties named, excepting Roscommon, and the balance has been reserved by your Committee for the same districts next year.

GENERAL OPERATIONS.

The operations of the Society, during the present year, may be classed under two heads—those undertaken in the districts to which the Government grant was restricted, and those where local contributions were made towards the expenditure entailed on the Society. In the former were the Counties of Cork, Kerry, Clare, Limerick, Tipperary, Galway, Mayo, Sligo, and Leitrim; and in the latter, districts of Antrim, Down, Tyrone, Fermanagh, Westmeath, Queen's County, and Wexford. In these several districts sixteen of the Society's staff of agriculturists were employed, in their usual course of instruction and superintendence at the sowing and the pulling seasons. As it had been found of much advantage, last year, to point out the soils best suited for flax culture, in districts where it was about to be grown, and to give directions for its proper preparation during the Winter months, this plan was acted upon at that period, and the result has been that tyros in flax culture have not been disheartened by indifferent produce arising from an indiscriminate sowing on all kinds of soil, badly prepared to receive the seed. Much attention was devoted to the drying and saving the flax straw intended for steeping on Schenck's system; and your Committee will take particular care to make all the Society's hands enforce the proper mode of conducting these processes, as the value of the straw to the steeper, and consequently to the farmer, is much influenced by the manner in which it is saved. At the conclusion of the season's operations, some of the agriculturists were allowed to remain in their districts until they had selected land for next year's crop.

In consequence of the great interest manifested in the flax question, and the determination, in many parts of Ireland, of immediately commencing the culture of the crop on an extensive scale, two of the Society's chief agriculturists have been sent on a preliminary mission, to report upon the soils in each locality, giving, at the same time, general instructions to landed proprietors and farmers, as to their selection and preparation for next year's crop. The chief districts to which they have been sent are in the Counties of Louth, Longford, Westmeath, King's County, Tipperary, Carlow, Kilkenny, Waterford, Cork, and Galway.

THE FLAX CROPS OF 1849 AND 1850.

In their last report, your Committee stated that, owing to the collection and compilation, each year, by Government, of the returns of agricultural produce, they had ceased to bring forward any estimates of the breadth of flax sown annually in Ireland, as the machinery through which the Government returns are collected ensures it being much more correct than they could hope to make it. According to Captain Larcom's report, it appears that the Irish flax crop of 1848 was 53,863 acres, and in 1849, 60,014, being an increase in the latter year of 6,451 acres. The County of Donegall produced the largest quantity, 12,662 acres, being one to every eighteen of arable land, while Kerry, with about the same area, produced but 136 acres. The Province of Ulster produced 57,651 acres of flax, while Munster, with about the same superficial area, produced but 937. Monaghan gave 6,775, while Limerick, with two and a-half times its area, yielded only 94 acres. At the head of the Southern and Western Counties appear those where the Society has already made some footing—Mayo giving 524 acres, which is more than all the rest of Connaught, and Cork 458, being about the half of what Munster produced. Sligo, again, with 218 acres, Clare 179, and Wexford 115, contrast favourably with such Counties as Wicklow, with 7, Waterford 11, and Kilkenny 16 acres ; the three former having already made a commencement under this Society's superintendence, while the three last-named have only now begun to bestir themselves. These details are all from the agricultural returns for 1849. Those for the present year not having been as yet compiled, it can be only stated, that there is reason to believe the breadth of land under flax, in 1850, to have been greater than in 1849, more especially in the Southern and Western Provinces, where many of the Counties would make a more respectable figure than in the table just quoted. The sowing would have been still more extended, had it not been for the scarcity and high prices of seed. The quality of Irish flax, this year, is not so good as usual, the fibre being found to want mellowness, and being difficult to work. The yield has also not proved so large, in some localities, as was expected from the very luxuriant appearance of the growing crop. Notwithstanding this, however, the brisk demand and high prices for the fibre have so well remunerated the farmer, especially when contrasted with the low rates for other kinds of agricultural produce, as to ensure a greatly increased breadth being sown next year; while, from the large supply of seed expected from abroad, and the quantity saved at home, farmers may be certain of obtaining what they require.

THE PATENT STEEPING SYSTEM.

The system of steeping flax in hot water, brought under the notice of this Society by the late Mr. Schenck, in 1847, has, from the first, had the earnest attention of your Committee. While approving the general principle, they have been cautious in pronouncing a decided opinion upon its details, in consequence of some objections having been made by parties in the North of Ireland. In order fully to investigate the grounds for these objections, they gave the matter in charge to a Sub-Committee, whose report, in which your Committee very fully concur, will be laid before the Society at the present meeting; and they feel confident that it will sufficiently justify you in giving every encouragement, in all parts of Ireland, to the carrying out of the patent system. In the course of these investigations, your Committee, being made acquainted, from time to time, with the results of the various experiments which had been conducted with a view to testing the merits of the plan, considered it advisable to give publicity to them; and, in consequence of their favourable nature, many parties have been induced to establish steeping concerns in different localities. The adoption of the system has been much facilitated by your Committee having induced the late patentee to lower his terms for the right of working.

In addition to those reported last year, as already organised, at Newport and Ballina, County Mayo; Crieve, County Monaghan; and Cregagh, County Down, others have since been established at Latimerstown, County Wexford; Abbeyleix, Queen's County; and Glasslough, County Monaghan; while preparations are being made for others at Omagh, County Tyrone; Strabane, near Londonderry; Toome, County Antrim; Craigdaragh, Ballinahinch, and Portaferry, County Down; Ballymahon, County Longford; Roscrea, King's County; Millford, County Carlow; Waterford; Mallow, County Cork; Limerick; Tuam, County Galway; and Sligo. It is probable, therefore, that when next year's crop reaches maturity, there will be upwards of twenty steeping concerns ready for work, capable of preparing the produce of 6,000 or 7,000 acres, or about one-tenth of the average breadth of flax at present cultivated in Ireland.

Your Committee have given their best attention to all new projects brought forward for preparing flax fibre for sale, as the Society must be naturally solicitous to render every improvement auxiliary to the advantage of the grower, and to the perfecting of the products of his crop. They have, therefore, carefully investigated each new plan that has been submitted, and, for so far, they believe that nothing appears to combine so many advantages as Schenck's system. Within the last few months, a plan of separating the flax fibre without steeping has been brought forward in London, by Mr. Donlan, which has attracted great public attention. Your Committee are of opinion, however, that the greatest caution should be exercised in the consideration of these statements, from the absence of data supported by the opinion of practical persons, competent to form a judgment on the merits of the proposed process, and from the fact that the dry preparation of flax fibre has been frequently brought forward, at former periods, and in different countries, but has, in all cases, been given up, owing to its inutility. Although it would be unjust to the inventor for the Society to pronounce decidedly against his plan, without full information on all its details, yet your Committee think, from the partial evidence which they have been able to collect, that there is no ground for supposing this process to be so advantageous, either to the producer or to the consumer, as Schenck's system; and they hope, therefore, that parties who have intended to adopt the latter may not be deterred by the plausible but unsubstantiated statements relative to the former which have appeared in the public journals.

DIVISION OF LABOUR IN FLAX MANAGEMENT.

It was early recognised by your Committee, that great advantage would be derived from the culture of the flax plant, and the preparation of the fibre for sale, being separated into two distinct departments, requiring the farmer simply to prepare the soil, sow the seed, and pull and dry the mature flax stems ; and leaving to other parties the steeping, drying, and scutching operations. Being aware that in Belgium a large proportion of the flax crop is purchased by factors from the growers, who steep it in the River Lys, and bring the fibre to market, your Committee, in 1843, encouraged some enterprising and experienced individuals to undertake a similar system in Ireland, and the Society awarded them gold medals in testimony of its approval. But, although the advantage was apparent of superior quality and handling in the flax thus treated, from a variety of causes it was not found to be profitable to the undertakers; and there is reason to believe that the system cannot be made practically available in Ireland. Schenck's hot-water method appears, however, to combine equal advantages in the quality of the product, with a fair profit to those who may embark in it as a business undertaking. While it is probable that those farmers who are particularly skilful in the management of their crop may produce as good an article by the ordinary mode, the proportion of such is so small, to the great mass of flax growers, that there can be no reasonable doubt the average quality of flax brought to market from any district would be greatly improved by the adoption of the new system. In the value of the seed, which would be all saved by the new process, a yearly addition of fully a quarter of a million sterling would be made to the produce of the Irish flax crop—a fact, of itself sufficient to warrant its general adoption. But the most important advantage of this method, as relating to the general extension of flax culture in Ireland, is the immediate market thus afforded to the grower, who is frequently deterred from an extension of his flax crop by the risk and uncertainty attending the ordinary process of steeping in the open air, as well as by the difficulty of managing a large quantity, all of which has to be steeped at the same time; while, in many districts, the absence of facilities for watering precludes farmers from attempting its culture. In the introduction of the crop where it has not hitherto been grown, the establishment of a steeping concern and scutch-mill at once removes all the difficulties arising from the critical nature of the ordinary processes and the want of a market on the spot for the fibre. With proper instructions in the choice of soils, their preparation, the selection of seed, and the sowing, pulling, and saving of the plant, the farmer will be enabled to produce a good article of flax straw, while the capital, skill, and undivided attention of the steeper will ensure that the fibre is brought to the market in a satisfactory state. Your Committee, therefore, consider that a much more rapid development of flax cultivation will take place all over the country, by the carrying out of Schenck's system, than if the growers were obliged to depend on the old method of manipulation.

SAVING OF FLAXSEED.

The value of the seed of the Irish flax crop, during the ten years of the Society's labours, cannot be estimated at less than 2,000,000*l.* Of this large amount probably not more than one-tenth has been rendered available, the rest having all been steeped with the flax, and thus utterly lost. Your Committee have been untiring in their exertions to impress upon the farmers the lamentable waste arising from this practice; but even yet with only partial success. The reasons which have been instrumental in causing farmers to neglect this advice are various. Many could not be made to believe that the quality of the fibre is not injured by taking off the seed, and this opinion has been strengthened by the operation of rippling being often carelessly performed, with inefficient tools, so as to tear and break the ends of the flax. It was also found difficult, in many cases, to carry on the rippling and steeping of a quantity at the same time. But the chief obstacle arose from the unfavourable weather which frequently sets in in our climate at the pulling season, rendering it very difficult to dry the seed properly in the open air, and obliging the growers to kiln-dry it, which, when hurriedly done, causes the seed to shrivel, and leaves it of little comparative value. It has only, therefore, been in certain districts that the saving of flaxseed has become at all general, while in others it has not been practised at all. It is with no little satisfaction, therefore, that your Committee have to call your attention to the fact that the drying of the flax stems, for Schenck's patent process, necessitates the preserving of the seed, and ensures its being saved of the best possible quality. Flaxseed thus saved can be employed in two ways, either for sowing again or for cattle-feeding. There is an annual import from foreign countries into the United Kingdom of about 650,000 quarters of seed and 70,000 tons of oilcake made from it, value together about £1,950,000, all of which could readily be supplanted by the home-grown article, while the valuable manure which it produces would return to the soil the greater part of the substances taken from it by the plant. To meet the annual demand for sowing, about 28,000 quarters of seed would be required, at an average value of £112,000. Nor would the money value be the only advantage of producing this at home. It often happens, as in the case of the present year, that enough foreign seed cannot be procured to meet the demand, and while its price is so much enhanced as to place its purchase beyond the means of the poorer class of farmers, much land intended for flax is put in other crops, after the import of seed has been exhausted. It is very gratifying to find that more than 6,000 bushels of seed from the steeping concerns were sold last Spring to farmers, and that the produce, as in all instances where *good* home-saved seed is used, was abundant, and generally excelled the crops from foreign seed. Your Committee calculate that nearly 40,000 bushels of Irish seed will be available for next sowing season, from this, and other sources. They look confidently forward to a period not far distant, when the import of foreign seed will be restricted to the quantity necessary to maintain the vigour of the plant, as it has been found that if the same strain of seed be used for successive years it degenerates in quality, but this might be obviated by changing the seed to different soils as is done in the case of other plants.

SCUTCHING MACHINERY.

The frequent and sustained attempts made by your Committee to apply hand labour in the scutching of flax, in the South and West, with a view to increase the employment of the poor, have proved unsatisfactory, owing to the inefficiency of the workers, and the great expense of the operation. Your Committee have, therefore, urged on all landed proprietors who are desirous of establishing flax culture on their estates, the absolute necessity of putting up scutching machinery, in order that their tenants' flax might be prepared in the cheapest and most effectual manner. As the impoverished state of the tenant farmers, consequent upon the repeated potato blight, and the low price of farm produce, has seriously affected the means of a large section of landed proprietors, many of the latter who are desirous of affording every facility to their tenants for the cultivation of flax, are unable to afford the outlay involved by the erection of scutching mills and steeping concerns. Your Committee have reason to believe that, if the provisions of the Land Improvement Advances Act, of last Session, were extended, by an interpretation of the clause empowering landlords to borrow from the treasury for the erection of farm buildings, so as to include the buildings and apparatus for steeping and scutching flax, many would at once avail themselves of this power. A representation to this effect was made to Government, and the subject was brought forward in the House of Commons, but the Chancellor of the Exchequer, acting on erroneous information, declined to accede to the proposal. Nevertheless, your Committee have not lost sight of the matter, and they have some hopes, next Session, of obtaining a more favourable consideration. They believe that men of business would often be found ready to undertake the steeping and scutching on a large scale, if they could rent concerns from the landlords, as has already been done in one instance, their outlay being thus confined to the floating capital required for the purchase of flax, &c., without, obliging them to expend a large sum in plant, before commencing operations, and thus increasing their risk; and it is probable that capitalists would readily advance money on the security of the concerns. In addition to the metal rollers, introduced a few years since, which have been found by far the best for bruising the flax stems and preparing them for being steeped, a new machine, invented by a Belgian, to which reference was made in last year's report, has since been improved, and, from the trials made in some concerns where it has been employed, promises to be a valuable implement, both as to economy and efficiency. As it does away with the necessity of employing trained scutchers at high wages, and can be worked by women or lads, it effects an immense saving in wages, while, from the quantity of work which it will turn out, it promises to clean flax at less cost than anything hitherto tried.

Within the last few weeks, another machine has been brought under the notice of your Committee, by the inventor, Mr. Plummer, of Newcastle-on-Tyne, which is of novel construction, brushes being employed in place of the usual blades. When its merits have been fully tested, the results will be made known to the public.

SALE OF FLAX FIBRE.

Frequent inquiries are made by flax growers in the Southern and Western Provinces, as to the best mode of disposing of the fibre. This point is of considerable importance. The absence of regular markets for flax, except in Ulster, seems, to the small growers, an insuperable objection to the cultivation of the crop. Your Committee have suggested to landed proprietors that they should assist their tenants in bringing the produce to the seats of consumption, by collecting it together, and forwarding it to a commission agent, in any of the great flax marts who, for a very small per centage, would obtain the highest market price for it. It was chiefly by adopting this plan that Sir Richard O'Donnell succeeded in establishing the growth of the crop so extensively in County Mayo. It must be admitted that considerable trouble is entailed; but your Committee consider that, if landlords are not prepared to take some pains, at first, in establishing a branch of agriculture which will so materially advance their own interests, they had better not enter upon the undertaking at all. And it is further to be remarked, that, by purchasing the flax from their tenants, at a fair valuation, some landlords have been enabled to collect rents which they would otherwise have had much difficulty in getting in. These observations have reference only to the sale of flax steeped and prepared on the old system, by individual farmers. In most cases, where a steeping concern is established, a market is at once available, as it is likely that the great majority of these establishments will be conducted by persons purchasing and working the flax for their own profit. Should it be found necessary or desirable, when the time arrives that flax shall be grown pretty generally over the South, there is no doubt that, by fixing upon a few days at intervals in each season, and selecting one chief town in every flax-growing locality, so arranged that both buyers and sellers can avail themselves of the extensive system of railroad communication, now rapidly approaching completion, a sufficient attendance of purchasers from Ulster and from Great Britain would be ensured. It has sometimes been alleged, as an objection to cultivating flax in remote districts, that the distance is great to the seats of consumption, and that, therefore, the expense of transport must deduct materially from the profits of the producer. To this your Committee would reply that, through steam communication, Cork, Limerick, and Galway will soon be within a day's journey of Belfast or Liverpool; and that the cost of transporting the produce of an acre of flax—a valuable article, of small bulk—is less than one-fifth of what grain would cost to bring it to the English or Scotch market. When it is considered that flax is brought all the way from Holland and Belgium, from Egypt and Russia, and that, in the latter country, it has to be transported hundreds of miles down the great rivers to the seaboard—while, for six months of the year, the ocean presents an icy barrier to all navigation, the objections above referred to appear quite puerile.

FLAX CULTURE ABROAD.

Since the formation of this Society, its labours have attracted considerable attention in other flax-growing countries, as well as in those where it is believed that the production of a raw material, in such extensive use, could be profitably introduced. Information has been sought from the Society at different times and by numerous parties from Russia, Belgium, France, Germany, Denmark, Italy, the United States of America, Egypt, Mexico, the Azores, and the British colonies of Australia, New Zealand, and North America. Improved machinery has been purchased in Belfast for Egypt, Germany, Denmark, and France, and persons from the North of Ireland have been privately engaged to instruct flax-growers in several parts of the world. In acknowledging the advantages which the Society has derived from the practical hints afforded to its agriculturists in those countries of the continent where the flax crop is most carefully cultivated, your Committee have always, in their turn, freely accorded the information required. They feel that an honourable rivalry in the march of improvement cannot but prove advantageous to Ireland, and that the efforts making elsewhere are the best incentives to continued exertion at home. Conscious that Ireland possesses advantages for the production of flax, equalled by few other lands, and excelled by none, they are satisfied that, with proper care and diligence, she may distance all her competitors in this department of industry. The Governments of different States have instituted special inquiries into the plans carried out in Ireland by the Society. The culture and manufacture of flax are watched over with a jealous eye, by the Government of Belgium, as one of the chief resources of that country; the Russian and Prussian Governments have lately sought information on the subject; and, within the present year an eminent French chemist came to Ireland on a special mission to investigate the question, the result of his researches was reported to the Minister of Agriculture and Commerce, and in his last Message, the President of the French Republic makes special reference to the measures which he proposes to introduce, with a view to encourage the extension of flax cultivation in France. In the presence of these facts, it becomes a duty incumbent on our own Government to aid, by every means in its power, the exertions which this Society is making, already with so much success, and promising so much future advantage to Ireland.

INCREASED CONSUMPTION OF FLAX.

When this Society was founded, in 1841, the Irish flax-spinning trade consisted of about 250,000 spindles. With the increase which has since taken place, and that now making, nearly 390,000 spindles will be in operation next year. The consumption of flax in the Irish factories, in 1841, was estimated at 16,000 tons; on the same data it will be, next year, about 25,000, being an increase of 9,000 tons. Taking 5 cwt. of flax as the average produce per Statute acre, this increase would alone require an additional breadth of 36,000 acres, being more than one-half of the entire Irish growth, while, to supply the Irish flax-spinners would take 100,000 acres, being 30,000 more than the present average sowing. To extend the comparison over the United Kingdom, we find that while the import of foreign flax in the years 1840, 1841, and 1842, averaged, annually, 62,500 tons, in 1848, 1849, and 1850, to the 10th of October in each year, it averaged 83,800, an increase of 21,300 tons, that increase alone being nearly equal to the production of 84,600 acres. If, therefore, the large extent of the imports of foreign flax was dwelt upon in 1841, when the Society was formed, it is evident that the arguments in favour of increasing the extent of flax cultivation in Ireland are strengthened precisely in the ratio of the increase which has since taken place. Your Committee would beg your attention to a fact which cannot be too frequently enforced on public attention, viz., that while Ireland, at present, produces only about 60,000 acres of flax, to supply the existing demand, in the United Kingdom, for the different products of the crop, nearly 500,000 acres would be annually required; and also, that, with the exception of a small proportion of the finer flaxes of Belgium, the entire of the foreign import could be replaced with Irish, to the great advantage of the linen trade, from the superiority of the latter. Nor, in the event of a greatly-increased production of flax in Ireland, is the market limited to the quantity required by the British Isles, for France, Belgium, Spain, the United States of America, and other countries, might be calculated upon, as customers, to a considerable extent.

FUTURE PROSPECTS.

Ten years having now elapsed since the Society was founded, your Committee may be permitted to review the position which has been attained by it, and the prospects of final success which the present aspect of affairs places before them. Contending, at its outset, with lukewarm support or open opposition, it has succeeded, by an undeviating adherence to its original principles, in gradually gaining the suffrages of all who are interested in the development of that great industrial resource to which it has applied itself. It now counts a large body of members, including the leading landed proprietors of the country, the chief flax-spinners and linen manufacturers of Ireland, and many flax-spinners in the sister kingdoms. It has been honoured with the patronage of the Queen and her illustrious consort, to whom, last year, it exhibited the varied products of our staple industry, and who have been pleased to express themselves warmly interested in the success of its labours. It has been favoured with the counsel and support of that excellent nobleman, her Majesty's representative in Ireland. Since his appointment to the Viceroyalty, his Excellency has been a constant and zealous friend to the Society, having at once recognised the great importance of its objects; and the increased weight, which the peculiar circumstances under which Ireland has since been placed, have added to them. Besides the Treasury grants which he has obtained in aid of the Society, and without which it would have been impossible for it to have carried out its views in many districts of the West and South, his

Excellency has been an earnest and persevering advocate, whenever opportunity offered, of the great advantages to be derived from an extension of flax culture in Ireland. It was, therefore, with feelings of peculiar satisfaction that your Committee had the honour to receive him in Belfast, in Sept. last, and to conduct him to some large establishments where the different processes of manufacture are carried on. They also presented his Excellency with an address, his reply to which was highly characteristic of the clear and statesmanlike views that have induced him to take so lively an interest in the progress of Irish flax culture and manufacture. The reception which he met with from the inhabitants of Belfast, and more especially from those who are connected with the various departments of our great staple industry, was strikingly illustrative of the respectful homage which must ever be rendered to men who have rightly conceived the duties of their high station, in labouring to render their power and influence conducive to the furtherance of social and industrial progress. His Excellency's visit to Belfast was also productive of much advantage in directing public attention more forcibly to the exertions of the Society, and the large consumption of flax in the Irish linen manufacture.

It has been already stated that the Society has attracted the attention of the Governments of several foreign States, who have gladly availed themselves of the results of its experience.

After ten years of unremitting exertions, during which it has accomplished much good, it can now look forward with a sanguine hope of seeing all its ends accomplished. The dissemination throughout Ireland of that information on flax culture which it has been at so much pains to collect, and the practical teachings of its trained instructors, in almost every County, were so far successful as to excite a general interest in the question, and, in many instances, to lay a firm foundation for more extended operations in future. The repeal of the Corn Laws further tended to stimulate the culture of flax by withdrawing the premium on the growth of grain crops, and placing them in the same category as the former, which has, for years back, been unprotected. It thus became manifest that, if the farmers of Ulster found it to their advantage to cultivate flax at a time when the prices of home-grown grain were kept up by the protection accorded to it, Irish farmers generally must benefit by resorting to flax when that protection was withdrawn. The repeated failure of the potato necessitated the cultivation of new crops to supply its place, and flax presented the advantage of enabling the farmer to pay his rent and taxes with its proceeds, and to reserve his grain and roots for the support of his family and his cattle. The failure of the wheat crop, this year, through a great portion of the Southern districts, and the feeling that, in the face of a free import from abroad, it will not, in future, be profitable to cultivate the crop except on soils and in localities of the island particularly suited by nature for its production, has induced an inquiry as to whether flax may not be often substituted for it where it has ceased to be remunerative; and as the entire breadth of wheat in Ireland, in 1849, was but 687,000 acres, while evidence has been already brought forward in this report to prove that a demand for the growth of 500,000 acres of flax exists, there can be little doubt of the propriety of at once rendering the latter available. The combined action of these causes has led to a gradual recognition of flax culture as one of the great mainstays, in future, of the Irish farmer, and, at the present moment, the improvement in the steeping and scutching operations, and the great and increasing demand, at advanced prices, for the fibre, have materially aided in encouraging the immediate introduction of this valuable plant, on an extensive scale, throughout Ireland. The landed proprietors and farmers have met, in different localities, to discuss the subject; and a local organisation has been formed in many of them, among which may be particularised County Louth; Portlaw, in County Waterford; County Carlow; Kilkenny, Inistioge, and Callan, in County Kilkenny; Midleton, in County Cork; Tullamore, in County Westmeath; Roscrea, in King's County; and Nenagh, in County Tipperary. These localities, and many others, have put themselves in communication with the Society, and have applied for the services of its agriculturists, to instruct them in the growth of next year's crop. Flaxseed from Riga has been brought into some of the chief Southern ports; scutch mills and steeping concerns are about to be established in many places; and there is every prospect of a large breadth of flax being cultivated in most of the Southern and Western Counties next year, which, if well managed and properly prepared for sale, must lead to a steady increase, year after year, until the crop is grown on all suitable soils, as a regular part of the farming rotation.

With these statements your Committee now conclude their report. They cannot doubt that they must prove gratifying to you, and they feel that to the Government and the public they will be equally satisfactory, in the cheering evidence which they afford of a long-neglected resource being at last about to be made available. That Ireland has largely participated in the distribution of natural sources of wealth with which Providence has endowed each region of the earth, is universally admitted; and it must be equally apparent that, among those which have fallen to her share, none is of greater interest and importance than the flax plant, furnishing as it does a twofold product--in the seed, which is one of the most nutritious articles of food for cattle, whose flesh constitutes so large an item in the sustentation of man—and in the fibre, which constitutes the raw material of a great and increasing branch of national manufacture, employing some hundreds of thousands of the Irish population. The flax plant, therefore, unites the interests of agriculture, manufactures, and commerce; and, as the first step and sure foundation of this industrial edifice, its extended cultivation demands the best energies of all who would wish to see Ireland prosperous and her people happy.

From the statement of accounts, from 31st Oct., 1849, to the same date this year, it appeared that there was a balance from last year of 162*l.* 5s 5d; amount since received, 1,488*l.* 14s 0d; total, 1,650*l.* 19s 5d; expenditure 1,285*l.* 14s 8d; balance, 365*l.* 4s 11d.

Mr. Shafto Adair, M.P., in rising to submit the resolution that he had the honour of being entrusted with, hoped he might be permitted to congratulate the meeting on the very remarkable document just read to them by the very intelligent and indefatigable Secretary of the Society. (Hear, hear.) He called it most satisfactory, and also most remarkable. With regard to the first assertion, gentlemen who had followed the details and figures in the report, into which he need not again enter, had received assurance that it was satisfactory, so far as the progress of the Society was concerned. (Hear, hear.) Indeed, the progress of the Society for the last ten years must be considered most satisfactory. He thought that the document was very remarkable—perhaps one of the most remarkable, as affecting any branch of industry, ever read before any Society engaged in promoting the objects of that industry; and certainly of the highest importance as connected with the branch of trade that most closely affected the interest of capitalists in this town, or of the operatives and farmers in the Province; and it had also a wide, direct, and powerful influence on the general interests of Ireland. With regard to the success which had attended the proceedings of the Society during the last ten years, he must confess that when he heard the rational, he would say the statesmanlike, reasons on which the proceedings of the Society had been founded, he was not surprised at their satisfactory result. He found that the Society, undertaken, as their Secretary had told them, under circumstances of great disadvantage, having powerful competitors in other portions of the industrial world of Europe, had carried on its operations gradually, slowly, but with a continual increase, arriving at last at that point of success that it was not only able to meet, without hesitation, all competitors in the open field, but, what was better far, that it did not hesitate to communicate to those very competitors such improvements as, in the course of their progress, this branch of industry had shewn itself capable of. Therein it had exhibited that spirit of self-reliance which made all industry prosperous. (Hear, hear.) With regard to the means adopted to make the preparation of flax more convenient for the purposes of trade, much, he thought, was due to those who had so indefatigably and carefully watched every project for this purpose submitted to their consideration. Schenck's patent had, as they learned from the report, been already of the greatest advantage in this way; but the Society was not content to stop with it, for they would proceed carefully to examine every project submitted to them, with a view to adopting and perpetuating such modifications as might appear feasible. Although he would not venture to detain the meeting by statistics, yet there were two points to which he thought reference might not improperly be made—(hear, hear)—he referred to the statistical disproportion between the number of acres now under flax cultivation in this country, and the number that might profitably be cultivated for that purpose. That was a point that concerned Ireland as a nation. The great proportion of her people must ever be occupied in the cultivation of the soil. It was the natural tendency, or, so to speak, the destiny, of the larger proportion of the inhabitants of this island—though, with the advantage, as here, of a vicinity to the highway of nations, with the particular bent and genius of the people of this country, trained to industrial pursuits, they might find an exception to the general law that must obtain in Ireland—that they must be agricultural; yet it was particularly happy to find that that industry which was employed in mercantile operations was peculiarly applied to that branch of manufacture—namely, linen, the raw material of which could be supplied from other portions of the country. With regard to the development of the spinning trade in this Province, it was most remarkably gratifying to find that, within the last ten years, according to the rough calculation which he had made, that trade had increased sixty per cent. What encouragement and employment to general industry must, during that time, have been given, he need not insist upon. He trusted that the anticipations of the report would be realised, and that they would find in the increased employment given in the manufacture of the raw material, an omen of what would hereafter be also given to those who grew that raw material upon Irish soil. (Hear, and cheers.) This Society, though established in this town, and carried on principally by the genius, and activity, and support of the inhabitants of Ulster, still had extended its operations far beyond the limits of this town or this Province, and he was sure that it was a matter of general congratulation that it had done so. It was of importance that the linen trade should flourish, not only with regard to the interests of Belfast and of Ulster generally, but to those other portions of Ireland whose agriculture had been struck down with even a more disastrous and fatal blow than in their own Province. Agriculture, he trusted, was about to be revived, and would certainly be revived with greater effect, if in connexion with such scientific operations as the cultivation of flax required. Their Noble Chairman had given them a hint in season in regard to their anticipations as to the future prospects of the flax crop. They all knew that when a new branch of industry was discovered, the prices that rewarded that branch of industry were, so to speak, disproportionately large. Numbers were introduced into the trade, and prices consequently fell; but that could be no cause for discouragement to those who undertook such operations with prudence and management. He was sure that the advice which their Chairman had given, based as it was on the practical knowledge of himself and others, would have the best possible effect. (Hear, hear.) He trusted that neither a spirit of speculation nor a spirit of discouragement would be permitted to interfere with that great effort which had now been begun, and the foundation of which, he hoped, was extending throughout Ireland to such an extent as to supply the industry of this Province with the raw material it demanded for its exercise, and so bring together into one common and united interest North and South—trading, commercial, and agricultural Ireland. (Hear, hear.) The Hon. Gentleman concluded by moving the first resolution.

Mr. Tennent, M.P., had been requested, since entering the room, to second the resolution, which he did with much pleasure. It would be superfluous for him, especially after the able speech of his Hon. friend, to do more than to express the gratification with which, in common he was sure with all present, he had heard a report which gave so favourable a view of the position and prospects of the Society. After much difficulty, and many obstacles, it had at last attained a position in public estimation, as one of the most useful and successful Associations ever formed in Ireland. (Hear, hear.) It appeared to him, that, at last, that difficulty and those obstacles had been in a great measure removed or overcome; and that, encouraging as had been the success already achieved, they were warranted in anticipating a much more rapid and effective development of the Society's operations in future. (Hear, hear.) But, however that might be, the Society could not be deprived of the merit of what it had already done—no doubt, from motives, in some degree, interested, but from motives of enlightened and generous self-interest—for self-interest when enlightened is generous—in contributing to alleviate the calamities of several calamitous years—in pointing out a means by which the now inevitable transition from one system of agriculture to another might be more easily accomplished, and perhaps, more than all, in setting an example of bringing to bear sound practical sense, judicious enterprise, and steady industrial development, as the safe and sure, perhaps the only safe and sure means, of remedying the social evils of Ireland. (Great cheering.)

The Lord Bishop of DOWN and CONNOR and DROMORE said that the resolution placed in his hands to propose was one particularly gratifying to himself, but which would recommend itself to their notice upon much higher and stronger grounds than any he could urge. When he stated that it was his privilege to propose a vote of thanks to his Excellency the Lord Lieutenant for his fostering care and unceasing activity to promote the objects of the Society, he felt that he carried with him all their sympathies and all their entire support. (Hear, hear, and applause.) For, when the record of the acts of Ireland's Viceroys should become a matter of history, and the passions and prejudices of the day would have passed away, the name and the Administration of the Earl of Clarendon would stand prominently forward, and his Lordship would be recognised as the patron, promoter, and encourager of Ireland's arts, science, and manufactures. It was not his own individual opinion that the Society had the warm sympathy, and the earnest zeal, of his Excellency the Lord Lieutenant, in promoting and encouraging the Society; for the report, so lately read, informed them that, through his influence, 3,000*l*. had been procured from her Majesty's Treasury, to extend and promote the cultivation of that crop, which had raised this Province so high among the Provinces of Ireland. Nor, did he stand forth, on this occasion, to be the exponent of his Excellency's views. They were recorded in the journals of the Society; and, in that able answer which he had given to the address, presented to him by the Society, on the occasion of his recent visit to this town. He felt that he need not occupy their time in enlarging on the resolution; and it was sufficient ground, why it should receive their support, when he simply moved the resolution, which was gratifying to himself, and which he was sure they would all heartily respond to. (Hear, hear.)

Mr. W. Sharman Crawford, M.P., said he had great pleasure in seconding the resolution which had been proposed by the Noble Lord the Bishop of Down. He felt that this Society was deeply indebted to his Excellency the Lord Lieutenant for the support and countenance which he had given to it; not only for the grants which he had been the means of obtaining for the Society, but also for that support which he had extended in the way of expressing his opinion of its usefulness. The opinion of the Lord Lieutenant, as expressed in the answer which he had prepared to the address submitted on the occasion of his Excellency's visit, had, no doubt, great influence in promoting the interests of the Society, and in increasing the amount of support which had been extended to its efforts heretofore. But, notwithstanding this increase of support, for which the Society was indebted to his Excellency, they should not forget that the Society must rely on its own efforts and exertions mainly. (Hear, hear.) They must not forget that this was the only true basis on which they could depend for the prosperity and success of the undertaking. The report, which had just been read, afforded them a strong stimulant to exertion; and, while it recorded their successes, also indicated the necessity for future exertion. It appeared from that report, that the increase of the flax manufactured, during the last ten years, had been from 16,000 to 25,000 tons; and that it required 30,000 additional acres of land to be cultivated for the crop, to be sufficient to meet such an increase; while, in order to supply the demand for the United Kingdom, it would not be less than 500,000 acres. Considering that we had only, in the year 1849, 16,000 acres, he would ask whether it was not necessary to exert themselves, so that they might not only be able to meet the demands of the manufacturers of this country, but also those of the United Kingdom? (Hear.) Ireland was capable of doing this. (Hear.) When he considered the number of acres in Ireland, he found that the entire number under cultivation was 14,000,000, and there were still 4,000,000 of what might be called waste land, a great proportion of which was peculiarly valuable for the cultivation of the flax crop. (Hear.) There was no crop which could be sown which would pay the cultivator so speedily for the reclamation; for bog lands, when properly drained and manured, seemed to be particularly adapted for that species of crop. And, if there were but 15,000,000 of acres applicable for such culture, one-thirtieth of them would be sufficient for the supply of the whole linen trade of the United Kingdom. (Hear.) Thus would Ireland be found to be capable of producing sufficient of the raw material to supply the whole trade: and why should we not rely upon our own country instead of depending upon a foreign supply—(hear, hear)—particularly when our own soil might be made to produce it under such advantageous circumstances? (Hear, hear.) But, at the same time, he fully agreed with their Noble Chairman in urging that the cultivation of flax must be cautiously advanced, for unless the cultivation of the soil be properly conducted in other respects, the flax culture would fail. Flax could only be cultivated properly when it was brought into its own place in judicious rotation. (Hear.) It was too often sought to propagate it in the same soil; and their efforts should be directed, as a part of the flax cultivation, to the general improvement of the system of farming —to give an impetus to industry, and instruction to the people, in the proper modes of husbandry. Thus it was that the objects of that Society connected themselves with the most extensive industry, as applied to general management of the soil. It was now a matter of deep importance to promote the cultivation of this crop, as he was decidedly of opinion that, if judiciously carried on, it was the most rent-paying crop which the land could possibly produce. (Applause.) In consequence of the depression in the value of corn, flax had become the great object to which the farmer must look for the payment of his rent; and when they further considered the present circumstances of the cotton trade—the diminution in the supply of cotton—and the possibility that the use of the article of flax may be so extended as to form the principal fabric of wear by the community, if that supply should continue short, it became a matter of deeper and still graver importance, and afforded an additional stimulus for its production. (Hear, hear.) The report went on to say that the Society had gradually arisen to the prosperous circumstances in which it was now placed, under luke-warm support or open opposition. There never was anything more true than that paragraph; and, as a landed proprietor standing there, he felt that he would not be doing justice to the exertions of the manufacturing interests of Belfast, if he did not declare that the prosperity of the Society had chiefly arisen from the untiring exertions of a number of gentlemen of this town. (Hear, hear.) There was something more than money or mere subscribers wanted to promote the prosperity of a Society; and the commercial gentlemen to whom he had referred had given their attention to the management of its affairs, and it was to this cause he mainly attributed its prosperity. (Hear, hear.) He must confess that it had not received, in past times, that degree of support from the landed interest, to which it was entitled at their hands. He trusted, however, that a new era had now appeared; and, from the attendance he saw there that day, it gave him that prospect. He hoped that the Society would now prosper—that it would go on in the steps which it had hitherto proceeded in—and that all interested in it would have the satisfaction and gratification of observing its successful results in the increasing prosperity and improvement of Ireland. (Applause.) It was also true they were indebted to the Lord Lieutenant for the support—the enthusiastic support, he might call it—which he had accorded to that Society; and, whatever differences there might be with regard to the political courses of the Government, he was quite sure that all who heard him, of whatever political party, were deeply indebted to him for the support which he had afforded them in carrying out the important objects of the Society. (Cheers.) He would conclude by seconding the resolution.

Lord **Dufferin** said that the resolution he had the honour of being entrusted with was one that he was sure no words of his were needed to induce them to adopt. Having read the resolution, he said he was perfectly convinced that there never had been a Society established in Ireland likely to be more useful than this Flax Society; and he was also perfectly certain that never had any Society a body of gentlemen more qualified judiciously to carry out its objects than the gentlemen who formed the Committee of the Flax Society. He could not help expressing his perfect concurrence in what had fallen from Mr. Crawford, that the thanks of the Society were eminently due to those members in this town who had so heartily aided in carrying out the objects of the Society. He would not occupy their time further, as he hoped they would hear some practical observations on the cultivation of flax. (Hear, hear.)

Mr. **Birney** (of Lisburn) had great pleasure in seconding the resolution; because, among other things, he knew the proper working of any Society depended entirely upon the Committee, and the active exertions of those to whom its management was entrusted; and no Society owed more to the untiring and zealous exertions of its Committee than their own. (Hear.) As they were all aware of the nature and extent of these exertions, he would not feel himself at liberty to trespass at any length upon their time, save only so far as it would be necessary for him to mention a few facts which might be conducive to the good of the Society, and to the interests of the public at large. (Hear.) For the last nineteen or twenty years, he had had the management of a property in the County Tyrone; and, during that time, he had taken some pains to impress upon the tenantry the propriety of growing flax. He had succeeded to a pretty large extent, particularly in the years 1848, 1849, and 1850. In these years, as he had remarked, the growth of flax upon the property had largely extended, and the consequence was, that the rents were well paid up to the present—the landlord was satisfied, and the tenants were happy and comfortable. (Hear.) As an inducement to the tenants, he had gone to some pains to compile a few facts which bore upon the question of the value of the crop, and which statement he believed was perfectly accurate. These calculations were based upon the Irish acre—for, although he now lived in a district of the County Antrim where the English acre was more in use, he was more conversant with the Irish acre—(a laugh)—and hence upon that measure his statement was based. He believed he was pretty correct in stating that about 16 pecks of flax was the proper quantity to set down for the Irish acre; each peck should produce from four to five stone of dressed flax—say four and a-half stone, which would make seventy-two stones to the acre. This, sold at 6s a stone, would produce 21*l.* 12s. He would now proceed to shew the cost per acre:—Rent per acre, 1*l.* 8s; County cess, 2s 6d; poor rate, 1s; 16 pecks of seed, at 2s 11d per peck, 2*l.* 6s 8d; horse labour, twice ploughed and harrowed—say four days at 6s 8d—1*l.* 6s 8d; total, 5*l.* 4s 10d. Taking the whole cost from the amount produced by the flax, the balance would be found to be 16*l.* 7s 2d. (Hear, hear.) He would merely mention these facts with a view to urge upon landlords particularly that it was their duty to impress upon their tenantry the peculiar advantages of flax cultivation. The sum he had mentioned—namely, 16*l.* 7s 2d—was what might, under average circumstances, be made of a single Irish acre of flax, produced by the outlay he had mentioned, together with the labour of the farmer and his family.* He thought the best way—and it was the course he had himself adopted—was for the landlord to go into the market and purchase the seed, where there would be no danger that it would be of such a kind as to run any risk of having a rotten or a bad crop. (Hear, hear.) These were advantages which he thought ought to be prominently brought forward before the tenantry of the country, in order that they might be fully aware of the advantages accruing from a judicious cultivation of the flax crop. (Hear, hear, and cheers.) He was sorry for having been obliged to trespass so long upon the meeting; but he thought that these facts, being of a statistical nature, and having been compiled with all possible accuracy, might be of some interest to that meeting. (Hear, hear.) If they were right, the profit on an Irish acre, at ordinary wages and ordinary cost, would be 16*l.* 7s 2d, after deducting all charges. He himself had met some little opposition, and some of the tenants had seemed to be afraid—urging that they could not eat the crop. "Very well," he had replied, "although you cannot eat it, yet, if you sow one acre of flax, it will buy three acres of oats when you sell it." (Hear.) In conclusion, he had great pleasure in seconding the resolution which had been proposed by Lord Dufferin.

Mr. J. S. Crawford said, before the resolution was put, he was desirous to lay before the meeting the substance of a letter which had been received that morning from Mr. William Dawson, of Bessbrook, relative to the profits of raising flax crops, in corroboration of what had just been offered:—"I send herewith an account of the management of flax by fifty-one farmers, stating every particular respecting soil, labour, &c.; and, although it has been acknowledged by all to have been a very unfavourable season for the crop, thou wilt observe that the average gain has been 7*l.* 1s 4d per acre."

[This table, setting forth the management and results above mentioned, was placed over the Chairman's seat, to which the attention of the meeting was directed.]

Sir R. Bateson said, he had great pleasure in submitting the next resolution for their approbation. He need hardly say that, in these short days, and with the mist that had set in, it would be very bad taste in him to trespass on their time by attempting to make a speech. They did not come there so much to listen to theories or speeches as to listen to the results of practice and to facts, so much of which he was delighted to hear from Mr. Birney just now. He (Sir R. Bateson) professed to be an ardent friend and admirer of the Society, though he must confess to a good deal of ignorance on the culture of flax; and, as the word selfishness had been used, perhaps that ignorance arose from the influence of that feeling, for his property, being on a limestone stratum, was not well calculated to grow flax, and, therefore, he did not cultivate the crop. He was delighted to see his Lordship and the other friends who had come from a distance from all parts of the country, and he had no doubt that the Society would continue to flourish and extend. He had always thought that they should not look to their own Province alone, as regarded the operations of the Society. They had been too much in the habit of separating Ireland into North and South, as if they were two different countries, and knew nothing of one another. Persons might say that a thing was all very well for Down or Antrim, but that it would not do for the South—for Tipperary or Limerick; but he was of opinion that they should conduct the Society on a large basis. (Hear.) He had always thought that not only flax, but also hemp, should be cultivated in the finer soils of Tipperary, Limerick, and Cork. Any person who had travelled through Belgium and those low countries must see at once that hemp could be cultivated in this country. [A sample of very fine hemp was here exhibited by the Secretary, and laid on the table.] That, continued the speaker, was a practical proof of what he had ventured to assert. Where was it grown? [Mr. MacAdam—In Limerick, this year.] He was happy to hear it came from a County that he had so many near and dear reasons for being attached to. He would say that the Society merited their approbation—it certainly had his warmest wishes for its success; for, independent of its other merits, it was, he believed, the only Society in Ireland in which they could all meet with hearty good-will. In it they all met as Irishmen—(loud applause)—regardless of those disputes that had so long existed between them—for the benefit of their common country.—(Applause.) Therefore, he had peculiar satisfaction in supporting it. He believed that it was the only Society in existence into which he could enter without the fear of hearing or saying anything offensive one to the other. He had set out by saying that a speech from him would be bad taste; therefore he must check himself. He had great pleasure in moving the resolution.

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* Note.—Mr. Birney's calculation means that, after deducting from the market value of the fibre the cost of rent, taxes, seed, and labour in sowing, the profit he names is left; but, out of this profit, the labour of pulling, steeping, spreading, and scutching, have to be deducted.

Mr. Shouldham, High-Sheriff of Longford, said that since the Society had conferred on him the honour of seconding the resolution, he would say a few words. The cultivation of flax in Ireland had been so much spoken of that little remained for him to say on the subject. It appeared to him that there was no obstacle to its extended growth, and it had everything as it were in its favour; no person could say that it would be in any way injurious to the country, but, on the contrary, it was, under the present circumstances, the only hope of their agriculturists. If the culture of it were carried out extensively, it would be the means of joining the agriculturist with the mechanic hand in hand, who might now congratulate each other on the large loaf; and it would give a blessing to both those classes of the community, second only to a large loaf—namely, a clean shirt. (Hear, and laughter.) He had great pleasure in seconding the resolution.

Dr. M'Kibbin then came forward to read the report subjoined; but

Mr. MacAdam said that the report was in his handwriting; and, as a man always read his own writing quicker than another would do, perhaps, as time pressed, it would be better that he should read it.

The **Chairman** having signified his desire that Mr. MacAdam should do so, that gentleman then read the report as follows:—

REPORT OF THE SUB-COMMITTEE APPOINTED TO INVESTIGATE SCHENCK'S PATENT SYSTEM OF STEEPING FLAX.

TO THE COMMITTEE OF THE ROYAL SOCIETY FOR THE PROMOTION AND IMPROVEMENT OF THE GROWTH OF FLAX IN IRELAND.

Your Sub-Committee, on the 31st July last, made a report on the results of their investigations up to that period. They do not consider it necessary, in this, their final report, to copy that document at length, but will simply embody the information it contained in the more extended matter which they are now able to lay before you. Though the Committee, from their many opportunities of inquiring into the efficacy and advantage of the late Mr. Schenck's process, since that gentleman first brought it before the notice of the Society, in 1847, were quite satisfied about it, they suspended their opinion until facts were brought forward on every point; and your Sub-Committee, in handing in the present report on the objections raised by some parties, will be able to convince you that they do not state a rashly-formed opinion of their own, but rather publish the results of experiments conducted by disinterested and competent parties.

As much of the advantage of flax culture depends on being able to economise, to the greatest extent, the crop after being grown, and to reduce the grower's trouble and hazard, whilst ensuring the greatest value, your Sub-Committee hope that their report will prove Schenck's system to realise these desirable points, and will shew that, if proper care be given to the process, something as near certainty will be attained as could be expected, and a much more steady return than by the old, slovenly, and uncertain process of watering, conducted by persons often ignorant of the commonest chemical principles, and generally attended with the loss of the seed—a most valuable part of the crop.

The doubts raised as to Schenck's process were—1st. That the yield of fibre would be less than by the ordinary mode of steeping; 2d. That flax so prepared would be weakened; and 3d. That the linen made from it would not bleach properly.

As respects the first objection, your Sub-Committee are of opinion that, either by the common process or by Schenck's, the yield of fibre will be lessened if the fermentation is allowed to go too far. The uniformity of temperature ensured by the latter would induce the belief that the yield of fibre should be increased. This is borne out by two experiments. In the one conducted at Lisburn, by Mr. Davison, in 1847, 112lbs. of flax straw, after steeping and drying in the ordinary way, gave 20lbs. of scutched fibre; and 112lbs., steeped by Schenck's process and dried, gave 24lbs. In another, tried this year, at Drimoleague, County Cork, from 112lbs. of straw, the old process gave 14lbs. 5ozs., and Schenck's, 17lbs. 11¼ozs. The increased yield in the first experiment was 20 per cent., and, in the latter, 23½ per cent., in favour of Schenck's method. As respects the quality of the fibre, the result was equally in favour of the latter system. In the first experiment, the flax steeped in the ordinary way spun to 96 lea yarn, and that by Schenck's system, to 101 lea. In the second, the ordinary gave 60 lea, and Schenck's 70. A further experiment was communicated by Messrs. Marshall & Co., of Leeds, some flax straw grown in Holland being the material employed. What was steeped in Holland, in the usual way, gave 61lbs. 1oz., hackled, to the 112lbs. of fibre; and two lots of the same straw, steeped by Schenck's system, in two different concerns, gave, respectively, 62lbs. 4ozs. and 64lbs. per cwt.; the value of the fibre, per acre, being, of the common steeped, 9*l.* 8s, and of the patent steeped, averaging 10*l.* 12s.

With respect to the second objection, that the flax might be weakened, the same remark may be made, that fermentation, conducted on a systematic and scientific plan, was not likely to weaken the fibre more than the same amount by an uncertain process. And, although the fibre might often be made *stronger* by the old plan, when the steeping was not carried far enough, yet, on the other hand, it was frequently over-steeped, and, consequently, *weakened.* In addition to the favourable report of spinners who had produced yarn from Schenck's flax, of fair strength, the following results of experiments were laid before them:—Several samples of fibre, of full strength, steeped on the patent system, in different places; samples of threads from Messrs. Marshall & Co., of Leeds, unbleached, bleached, and dyed, made from the patent steeped flax to which reference has been made, all being of good, strong quality; a sample of 140's weft-yarn, from Messrs. S. K. Mulholland & Hinds, and a sample of boiled yarn, for heavy linens, from Messrs. Dunbar, M'Master, & Co., of Gilford. All these were considered of fair, average strength. It is evident to your Committee that flax steeped by the patent process can be made either strong or weak, it being in the power of the operator, by increasing or decreasing the time of steeping, or by raising or lowering the temperature of the water, to make whatever quality suited the market, or would best remunerate him. They submit, that *strength* is not what will be most profitable to the grower, but that *fineness of quality, with softness,* will often remunerate him much better, and his interest will be to produce what is most in demand and highest priced. At this point the duty of the Society ends; whatever will best remunerate the *grower* being what it is their duty to point out, and it is for the *spinner* to choose strong or weak, as he may require it for different customers.

As to the 3d objection, that the patent steeped flax might not bleach well, the samples of yarn, thread, lawn, and linen, produced at the present meeting, are sufficient evidence of its groundlessness. The following letter from an eminent bleaching firm is still further satisfactory:—

"*Lisburn, 28th August,* 1850.

"MESSRS. S. K. MULHOLLAND & HINDS,

"DEAR SIRS,—We have the pleasure to return, finished, the two pieces of linen made from flax steeped on Schenck's plan, which you sent us to bleach;

and, during the process, we found the advantage more decided than with the lighter fabrics you sent us, some time ago. These, with other opportunities of judging, have caused us to conclude that the general introduction of Schenck's patent process would be a step in the right direction, unless objections can be substantiated unconnected with the bleaching department of the linen trade.—Yours, very truly,

"Richardson & Co."

Thus your Sub-Committee believe that all rational objections have been satisfactorily met. The general question having now been put in a favourable position, it rests with others to pursue the details more minutely; and it is hoped that they will be careful to note and make known both improvements and sources of failure, if any arise, so that the public may benefit by the results of their experience.

Having thus disposed of the subject confided to their care, your Sub-Committee feel called upon to take some notice of another project for preparing flax fibre, inasmuch as its promoters allege it to be superior to Schenck's steeping system. They allude to Mr. Donlan's plan of separating the fibre without steeping. They are so fully aware that the Royal Flax Improvement Society have no other object than the rendering flax culture of the greatest possible advantage, that, while they discharge their duty, on the one hand, of pointing out the successful result of experiments made with a view of testing the merits of Schenck's system, on the other, they feel called upon to lay before you what they conceive to be radical defects in Donlan's proposed plan.

It is sufficiently obvious that so simple a mode of obtaining flax fibre, as its mechanical separation from the stems of the plant must have been the earliest method adopted when this substance was first used for textile purposes. It is probable that accident first made known the fact, that, by immersing the flax stems in water, when above a certain temperature, the fibre could be divested of impurities by the decomposition of the foreign matters, which, with the woody matter of the stem, are united to it. Up to the present day, no other means of obtaining a pure fibre have been devised. Weak acids, solutions of caustic potash and soda, soap ley, and lime, have all been tried, but have all been found objectionable. The attempts which are on record of different revivals of the dry process fully prove that there is nothing new in Mr. Donlan's proposal. It is known that patents have been taken out at different periods for a similar process, but they content themselves with a reference to some of the best known cases. In 1815, the Irish Linen Board adopted the dry preparation, then brought forward by Mr. Lee, and the records of that Board shew that its principle was almost identical with that now proposed by Mr. Donlan. The most sanguine expectations were entertained of it. The very arguments now used in favour of Donlan's mode were then stated —viz., that a larger yield of fibre was obtained by it, that the colouring matter was discharged by the most simple means, that greater strength was obtained, and less tow produced. The result was, that, after an expenditure of 6,000*l.* in introducing the system throughout the country, the Linen Board abandoned it, in consequence of insuperable defects. In 1816, a Mr. Pollard, of Manchester, brought forward the dry preparation system, and proposed to make an article from flax which could be spun on cotton machinery. This also fell to the ground. In France and in Belgium similar trials were made, which turned out equally unsatisfactory. Your Sub-Committee are of opinion that the fatal defect of flax fibre, separated by the dry process, consists in the retention of the gummy and albuminous matter incorporated with the fibre. This being fermented by moisture at a moderate temperature, and decomposed by alkalis and acids, is not only useless, but absolutely pernicious, if thus retained, since, in the processes of manufacture, when it necessarily undergoes the action of all these changes, it must come away. The case, therefore, as regards steeped flax and dry prepared flax, simply stands thus:—In the former state a nearly pure fibrous matter is produced, and the material is thus in the fittest state for spinning even yarn and making good linen; in the latter, along with the fibre is combined a foreign substance, which must be got rid of afterwards, to the detriment of the spun and woven products.

Although this appeared evident to the Committee, when discussion was first raised relative to Donlan's invention, yet, anxious to investigate it more fully, with the chance of finding something practicable in it, they proposed that he should bring over his apparatus to Belfast, when, in the presence of practical persons, its merits should have the most careful and impartial consideration; and, if this should result in anything satisfactory, the Society would give its influence freely in introducing it. This proposition was not complied with. The Committee then sent your Secretary to London, and forwarded some flax straw for a trial; but, although there for several days, he was unable to get a sight of Mr. Donlan or of his apparatus. On leaving London, he requested Mr. J. G. Marshall, M.P., to have the kindness to investigate the matter, and that gentleman deputed his brother to undertake it. The following letter from Mr. Arthur Marshall contains his opinion:—

"*Leeds, Nov.* 11, 1850.

"DEAR SIR,—My brother has asked me to reply to your letter about Mr. Donlan, because I have seen his process, and my brother has not seen it. We sent some straw from Patrington, both rated and unrated. The samples I saw from each of the lots were well swingled, but at what expense I did not learn. The process appears to me tedious and expensive, as far as I could judge from the small quantity that was swingled when I was there. The unrated flax was extremely coarse, and only suitable for the purposes named at your Committee meeting. I had previously advised Mr. Donlan to have some quantity swingled of the same straw, rated and unrated, and to submit the result to some flax-spinner; but I am not aware that he has done so. If he wanted to test the value of his invention, I think he cannot do better than adopt your suggestion, and bring his machinery over to Ireland. I saw quite enough to convince me that the process would not be suitable for us to adopt at Patrington. However perfect you may make the swingling, I cannot see how it is to supersede the action of fermentation, in dividing the fibres.—I remain, yours truly,

"Arthur Marshall.

"James MacAdam, Esq., jun."

On receipt of this letter, Mr. Marshall was written to for permission to make it public, and he replied as follows :—

"*Leeds, November* 25, 1850.

"Dear Sir,—In reply to your letter, my brother and I have no objection to your communicating to the Society the views we take of Mr. Donlan's mode of treating flax straw. We sent to Mr. Donlan some flax straw from Patrington, of good average quality, part of it rated straw, and part unrated straw. I was not able to attend a meeting of gentlemen at Mr. Donlan's place, when samples of this straw were swingled, and the result published, but I called soon after, and saw the result. I also saw a small quantity swingled by one of Mr. Donlan's workpeople. The flax was certainly very fairly swingled, both that which had been rated, and the unrated straw, but I could not perceive anything new in principle in Mr. Donlan's machinery, and the process appeared to me to be tedious and expensive. This is confirmed by Mr. Donlan's printed statement, where he estimates the cost at 4*l.* 6s 8d per ton of flax straw swingled; and at the rate of two tons per acre this would be 8*l.* 13s 4d per acre, for labour only, at a low rate of wages, 1d per hour for men, and ¾d per hour for women. The quality of the unrated flax was very poor, although apparently strong; but, if the material was spun wet, I should doubt whether the yarn would be stronger than yarn from rated flax. Mr. Donlan's object appears to be to produce a strong, coarse article, for manufacturing into sail-cloth and other fabrics of that description. Our object at Patrington being to produce flax of fine quality, which we consider the more profitable of the two, Mr. Donlan's plan appeared unsuitable for our purpose, and we thought no more about it. As to the plan of bleaching the flax fibre, and producing a substitute for cotton, we do not know anything about it, but it is not a new idea, and we should expect, from the result of former experiments, that, owing to the great difference between flax and cotton fibres, however the flax may be managed, the cloth produced will still be very different from cotton cloth. It is very important, however, that the matter should be thoroughly investigated, by competent judges, because the announcement of such a plan tends to unsettle the minds of parties who are disposed to erect steeping concerns. We ourselves, however, have not been deterred, by this cause, from carrying out an extension we had begun of hot-water steeping vats at Patrington.—I remain, your obedient servant,

"Arthur Marshall.

"James MacAdam, jun., Esq."

In August, Mr. Price exhibited to the Committee a collection of samples illustrating Donlan's processes. One series shewed the flax fibre as separated by the dry mode, some tow from the same, and some coarse fabrics made from it. The fibre appeared coarse, harsh, and wiry, deficient in spinning quality, but very strong. It was considered value for about 30*l*. per ton, and suitable for ropes, canvass, rick-covers, &c., especially if these fabrics were pitched or oiled, so as to prevent the action of air and moisture on the foreign matter with which the fibres are incorporated. The tow, valued by Mr. Price at 84*l*. per ton, was considered worth not more than 28*l*. The other series of samples consisted of flax fibre, partially or wholly bleached; and of thread and linen alleged to have been made from it. A considerable improvement was manifest in these specimens, evidently owing to the foreign matters having been partly got rid of by chemical means. Still, none of them appeared to possess that softness and mellowness which steeped flax, simply scutched and hackled, when of fair quality, displays. The Committee were rather disposed to consider these samples as curious and interesting, than as likely to be useful, since it has long been an admitted axiom that the bleaching process cannot be so judiciously employed on the flax fibre, or even on yarn, as on the woven fabric. Many persons have experimented on the bleaching of fibre; and the Committee are in possession of samples much more lustrous and silky than any Mr. Donlan has shewn, but no practical end can be attained by their employment. Within the last week, some flax straw has been prepared near Belfast, part of it by steeping, and part by the dry process. The samples are before you, to shew for themselves, the steeped lot being more than double the value of the other.

Having thus reviewed the products of Mr. Donlan's so-called discovery, your Sub-Committee would add a few notes on the paragraphs which have lately appeared in *The Morning Chronicle* in support of this project. In so doing, they must express their decided opinion that the author of these articles is extremely ignorant of almost all the circumstances connected with the culture and manufacture of flax. In fact, this ignorance is so constantly apparent, that to take up the errors *seriatim* would require a separate report. Your Committee's remarks must be, therefore, confined to a few of the most prominent:—1st. It is stated that Donlan's process (unlike all previous plans) is simply effected by mechanical means. Now, it is a well-known fact that Lee's process and others were effected by mechanism only. 2d. It is stated that the dry process retains all the oleaginous properties of the flax, and is, therefore, superior to the steeping system. The very reverse is the case, as dry-prepared flax is rough and harsh, while steeped flax is soft and mellow. 3d. It is stated that flax fibre is injured by steeping, and receives various impurities. Now, steeping is the only mode of getting the fibre *free* from the impurity which the dry process retains. 4th. By steeping, flax is deteriorated in value. As a proof of the contrary, none of Mr. Donlan's flax has been valued at more than 30*l*. per ton, while good steeped flax averages 50*l*., and often reaches 80*l*., per ton. 5th. Kiln-drying is named as a usual process, whereas it is well known that, except in a few localities, it is now never employed. 6th. The *shoves*, or woody refuse of the stems, are recommended for cattle, while science and practice have both proved them utterly valueless for such a purpose, and they are with difficulty made available even for manure, 7th. Saturation of the seed in a chemical solution is alleged to increase the fibrous part of the plant. So small a portion as the seed would imbibe could scarcely be expected to act sensibly on the constitution of the plant; and the husk of flaxseed is known to be impervious to liquids, so that, however its exterior might be affected, the kernel, which contains the germinating principle, would remain intact.

But all these errors sink into insignificance, compared with the calculation that 100,000 acres of dry-prepared fibre would give 2,800,000*l.* more value of fibre than the same quantity steeped. Even granting the correctness of the allegation, that double the produce of dry-prepared flax could be obtained from the straw, it is evident that, since the former is valued, by competent judges, at 30*l.* per ton, while the latter, as steeped on Schenck's system, has actually averaged nearly 60*l.* per ton in the Belfast market, this assumed advantage is at once negatived—the value remaining almost precisely equal. And, while the latter could be applied to all the purposes of manufacture, the former could only be used for a few.

Your Sub-Committee do not deem it necessary to enter further into this inquiry. Sufficient evidence has been given of the entire want of solidity in the basis on which such flourishing, and, to persons ignorant of the subject, such plausible anticipations have been erected.

They will only further add, that the absence of all evidence supported by practical men, and the directly adverse testimony of the only practical person who has seen the process, should suggest the utmost caution to those whose sole means of judging are the perusal of newspaper paragraphs, or the inspection of nicely got up samples. They have entered thus fully on the subject, because they feel that the Society has a two-fold duty to perform—in making its knowledge and experience available to guard the public from disappointment and loss; and in recommending the adoption of Schenck's steeping system to all who are interested in promoting the growth of flax, as having stood the test, after being subjected to a severe examination. They consider that it would be most unfortunate for the country if this more than doubtful project of Mr. Donlan should divert attention from it. While your Sub-Committee would most sincerely rejoice to find their unfavourable opinion of the latter incorrect, they feel it a paramount duty to issue a timely caution, both to flax-growers and to the promoters of the scheme, that the first-named may not rely too strongly on plausible appearances, neglecting the substance while grasping at the shadow; and that the last-mentioned, in their over-sanguine anticipations, may be induced to consider more carefully the data on which they found their calculations.

(Signed) ROBERT M'KIBBIN, M.D.
JOHN PRESTON.
JAMES MACADAM, Jun.

Belfast, 26th November, 1850.

Dr. HODGES being called on by the Chairman, rose and said—My Lord and gentlemen, the importance of flax cultivation to the country, after much opposition from ignorance and prejudice, is, at length, fully admitted.

The question is no longer whether the growth of flax should be encouraged, but how it may be, most economically and safely, brought into the state in which it is required by the manufacturer. The sums which have been placed at the disposal of your Society, by his Excellency the Lord Lieutenant, prove that the Irish Government fully appreciate the advantages to be derived from encouraging the development of this branch of our national industry; and, in almost every State in Europe, we find that, at the present time, strenuous efforts are being made to promote flax cultivation. In Belgium, which has long been regarded as the model country of flax, we find the Government using every means still further to advance the culture of that crop, and labouring, by rewards, to encourage the flax grower. (Hear, hear, and cheers.) In 1848, the Belgian Government obtained supplies of seed from Russia, which they sold upon credit, and at cost price, to the poorer class of farmers. In France, also, you may expect to find a powerful competitor in the cultivation of the flax crop; and the late mission of M. Payen, an eminent French chemist, and his report to the Minister of Commerce and Agriculture, shews us that the Government of that country are determined to exert themselves to secure some of the advantages to be derived from an abundant home supply of the raw material of their linen manufacture. It is in Prussia, however, that we find the greatest anxiety on this subject. Many of you may not be aware that in that country, in the beginning of the present year, an Association on the plan of your Society, and under the patronage of Government, was established, to extend the culture of flax. Its head-quarters are at Berlin, and it proposes branch establishments in the Prussian Provinces, and schools for the education of young farmers in the management of flax. Several of these schools are already in operation, and, during this Summer, several persons have been sent by Government to this country, to study the various improvements that we have adopted, so as to facilitate their introduction into Germany, and thus endeavour to recover for the linen trade of that country its former position. I mention these things that you may not relax your exertions. There is another subject which, as it is closely connected with my professional duties, I wish to take the present opportunity of alluding to. The members of the Society may recollect that, at the annual meeting in 1848, I recommended a mixture of various fertilising substances as an economical means of restoring to the soil the matter taken away from it in the straw of the flax plant. I mentioned that, by applying the artificial compound, and at the same time using, as manure, the excrements of the cattle of the farm fed upon the seed of the plant, all the substances of which the plant robs the soil would be effectually restored. The mixture which I then recommended, from a careful consideration of the composition of samples of Irish flax which I had analysed, could be purchased in sufficient quantity, for the small sum of 10s 6d per acre, to replace all the materials of the straw, but not those of the seed. The receipt which I gave has been copied into various journals, both in France and Germany, and published as a complete manure for the flax plant. I am, therefore, desirous, in the present meeting, to correct this serious error, and to state distinctly that my object—as mentioned when the communication was made—was merely to shew that the alarms which at that time prevailed, as to the exhausting effects of the growth of flax, were without rational foundation, as science has given us a simple and cheap means of preserving the fertility of our soils, by replacing in them all that the straw of the plant had required for its nourishment. The new system of steeping, in many respects so advantageous to the country, however, requires that the farmer should be taught that, when the seed of the plant is not consumed as food upon the farm, the materials which it carries away to the steeping establishment should be replaced in the land by manure. Unless this be done, it is clear that flax cultivation must contribute to the deterioration of our soils. Since the period of the report to which I have alluded, several analyses of flax straw from Russia and Belgium have been published, which tend to advance our knowledge of the effect which the growth of that part of the plant exercises upon the soil. We are still, however, not in possession of a sufficient number of analyses of Irish grown flax. The analyses of Irish flax which have been published by Sir Robert Kane, and also those which have been made in my own laboratory, would lead us to conclude that the plants grown in this country do not take from the soil so large an amount of alkalies, potash, and soda, and of phosphoric acid, as appears in the ash of foreign specimens. I may be permitted to observe, that all the examinations which I have made of scutched flax, and also of the stem of the flax, before and after steeping, confirm the accuracy of the statement to which I directed the attention of your Society on a former occasion—that the steep water extracts only a portion of the inorganic or mineral matters, which had served for the development of the stem of the plant, and that it was impossible, by employing merely the water of the steep-hole as manure, to replace all that had been withdrawn from the field; and that we should imitate the experienced farmers of Belgium, by placing in the soil, by artificial means, a proper supply of materials to obviate the exhausting effects which the cultivators of the plant would otherwise inevitably produce. It is, I conceive, the duty of this Society, whilst labouring to extend the culture of the crop, to point out to the farmer how he may repair, by manure, its effects upon his fields, so that the produce of our ordinary food-producing crops may, as is at present witnessed in Belgium, be increased and not diminished by the progress of flax cultivation. In connexion with the questions which at present occupy the attention of the Society with respect to the economy of the various methods of steeping now followed in this country, I have much pleasure in being able to bring before the meeting the results of some experiments lately made in Germany, for the purpose of ascertaining the comparative value of the old and new methods. These experiments are arranged in a tabular form, and will, I think, form an interesting addition to your report:—

SCHENCK'S STEAM RETTING.

No. of sample.	Duration of steeping.	Loss.	Produce from 100lbs. of steeped flax.	Produce from 100lbs. of unsteeped flax.
1	60 hours	22 per cent.	17·54-100lbs.	14lbs.
2	60	12	14·31	12·59
3	96 & 60	26⅖	17·07	12·57
4	157	26	15·33	11·34
5	157 & 60	26	12·12	8·96
6	72	25	15·34	11·50
7	258	23	17·38	13·38
8	70½	8⅔	13·43	
9	68	14·64	14·45	
10	68	10	17·09	

COLD WATER RETTING.

No. of sample.	Duration of steeping.	Loss.	Produce from 100lbs. of steeped flax.	Produce from 100lbs. unsteeped flax.
1	480 hours	14½ per cent.	14·33-100lbs.	12·43lbs.
2	480	25	9	6·75
3				
4	552	25	14·81	11·10
5	768	25	9·50	7·12
6	648	25	12·75	9·56
7	888	25	16·43	12·32
8	300	unknown.	12·71	

It was also found that, on an average, 1,200lbs. of flax-straw afforded by the steam process 144lbs. of pure flax, and by the old method 118lbs. The experiments were ten in number, and were made with nine different kinds of flax. They give the duration of the steeping, the loss in steeping, and the produce of fibre both from fresh and steeped straw. They, therefore, convey precisely the kind of information at present required.

Mr. Niven, of Chrome-hill, being called on, said—My Lords and gentlemen, the Royal Flax Society have got credit for their exertions in promoting the growth as well as improving the quality of flax in all parts of Ireland. The South and West are now increasing their quantity and improving their quality, owing to the Society's labours. The Belfast spinners are good judges of the quality suitable for their purpose, and are ready to give the farmer the full value; and careful handling will pay the farmer well, since he will receive a price according to the quality, while carelessness of treatment will not pay any flax-grower. (Hear.) I know of no crop which requires more attention, first in selecting suitable soil, then in cleaning and pulverising the ground, and careful weeding of the crop, with proper attention to the pulling and steeping. From a great number of experiments, for the last ten years, both in cisterns within doors and in the field, I find the best temperature for watering the flax to be 70 degrees, which is seldom obtained out of doors in this country. Hence, Schenck's system is the best, provided more time is given, and the heat kept under 80 degrees. I have heard they use the heat above 90; but, in that case, the flax will not be so soft and silky as if done at or under 70 degrees, giving it time. I have steeped it in three days, in a shallow pit, only two and a-half feet deep, during very hot weather. I have likewise done it in a stove, where the temperature of the water was raised to that of the pit.—A great heat, in my opinion, coagulates the albuminous matter contained in the straw, and, although freed from the wood, it is retained in the fine fibre, which makes it hard and "hasky" to the feel. I have offered these latter observations, as there is an old plan, lately revived, which would make a serious change on the nature of the fibre. It is proposed to take the flax from the field, after being pulled and dried, and to prepare it for the spinner immediately, leaving all the oil, gluten, albumen, and colouring matter in the fibre. This would render it hard, the fine fibres adhering together, so that the spinner would not be able to spin fine numbers of yarn. It would be strong and give a greater weight. Of this, at least ten per cent. would be lost when the yarn is boiled for the manufacturer's use. I have bleached a small portion of coarse fabric made of the prepared flax. It lost, in steeping in warm water for a night, 11 per cent.; in the first bleaching operation, 15½ per cent. more; and, in the last, 9 per cent. more. The original weight of the piece was 338 grains, and, when finished, being not even full bleached, the weight was reduced to 231 grains. I would, as a member of this Society, advise it to be cautious, and to judge only from the results of experiments made by the Committee, and that none of its members would take for granted all that is advanced by newspapers. At the same time, it will, no doubt, encourage all new inventions, when proved to be of use and benefit to the country. Mr. Niven further stated, that he had been trying an experiment that morning. He had taken a handful of flax, on Monday last—the very handful, by the way, which he had had the honour of rippling before her Majesty—and placed the half of it in steep, at a heat of 70 degrees. He had it taken out that morning, and had it scutched. On looking at the two portions of the same stalk, so treated, on being taken out of the steep, there could be but little difference observed, one being but a little more hard and black-looking than the other. It looked very well, being, perhaps, loyal flax—(laughter)—but, upon the application of the microscope, he could discover such differences as led him to conclude that the plant would never do, without steeping, as a preparation for manufacture.

Mr. W. G. Andrews said he had undertaken a number of experiments, as a person who had taken an interest in everything connected with flax, and in its manufacture and improvement. He had now come forward as a member of the Committee of the Flax Society to lay before the meeting the result of these experiments. As he had attended every annual meeting of the Society which had as yet been held, he could not help following Mr. Crawford in what that gentleman had said as to the increased support which this Society was receiving from the landed proprietors, and from other persons of such influence as those whom he now saw assembled before him. He trusted that the interest exhibited in that room would be carried forth from it; and that the occupying tenants would see the advantages of the situation in which they were placed, and that they would grow a greater quantity of flax than hey had hitherto done. He thought he might fairly say, from anything he had seen and heard, and from conversations which he had with occupying tenants, that the time was come in which they perceived it to be their interest, and when they would grow a greater quantity of flax than they had done at any former period. (Hear, hear.) He regretted that he had not a written report to hand in, formally, to the table, in reference to the experiments which he had carried out; but he would submit a few facts in relation to them, with the notes which he had margined them with; not venturing to detain the meeting with any observation which was not quite pertinent to the experiments themselves. [Mr. Andrews then read a tabular statement of the results of his experiments in steeping, at different temperatures, and it was agreed, on the suggestion of the Chairman, that the table should be printed in the appendix of the Society's annual report.]

Sir J. M. **Stronge**, Bart., of Tynan-Abbey, in moving the next resolution, confessed that, until this day, he was sceptical as to the great advantages of Schenck's process; but, after the admirable report of the Committee, and the luminous statements of the gentlemen who had delivered addresses that day, there could be no doubt of the great advantages of that system. If any gentleman had any doubt on the subject, he had only to look at the yarns prepared by Schenck's process, and the fabrics prepared by the other process. For his part, all his doubts were removed, and he would not take up more of their time, but content himself with moving the resolution.

Mr. S. K. **Mulholland**, in seconding the resolution, observed, that the nature of it appeared to him to form one of the most important features in the history of the Society's proceedings. It was very clearly evident that nature had most liberally acceded to them all that was necessary for the successful growth of flax, but it was also evident that art and science would have to be called in to enable them to follow up the process, or, at least, to improve and expedite it. Instead of the old mode of steeping, to enable the material to be useful, it was desirable that they should be enabled to carry on that stage of the process of dressing the flax on a larger scale than could be effected by the antiquated and primitive way he had mentioned. At the juncture of their proceedings when this desideratum was felt most, Schenck's patent appeared, upon which they at first looked rather suspiciously. The theory of it appeared good, but they doubted the practicability of carrying it into practice. They were doubtful in identifying their name or character with it, till, at least, by repeated observation and the frequent appointment of Sub-Committees, who took great pains to make themselves acquainted with it, they satisfied themselves on the matter, and the report of the Sub-Committee would fully explain the views of the Society with regard to it. He trusted that what had occurred would lead to greater extension of the system. He wished to make an observation on a point which was fully alluded to in the report; but the matter had been so much taken up by *The Morning Chronicle*, he thought it right to say, that they looked with very great doubt, indeed, upon the new system spoken of by that paper. (Hear, hear.) It was natural that from their Society, patronised as it was by the Government, should emanate any improvement that might take place in the cultivation of flax. They looked suspiciously on these joint-stock Companies, and he would suggest to any gentleman that he should consult the Society before adopting this new process, if it so far came to maturity as to command any amount of support, and he would get their best advice.

Mr. E. M'Donnell, of Glenarm-Castle, proposed the next resolution. He said, it seemed to him to be one of a practical nature, and having reference to the able report which had been read by the talented Secretary of the Society. (Hear, hear.) While they regarded the prosperity which had attended the Society, they could not help acknowledging the means by which it had been brought about; and he thought that, looking at the degree of perfection to which the Society had now been brought, they could not fail to record their confidence in the exertions of the Secretary. [Mr. M'D. then read the resolution.] With respect to the advantages of the Society, it was impossible to meet so many gentlemen as were assembled that day, without knowing that it was necessary to use every exertion within their power to promote the objects the Society had in view. (Hear.)

Mr. Jonathan Richardson seconded the resolution. He said, when he came into that room he had no expectation that he would have the honour of addressing the meeting. He could, however, assure them, after a great many years' experience, it required greater and greater care to be exercised in every new successive experiment, in the matter of improvement. At least, it was necessary to know that the plans submitted to the trade and to the public had been thoroughly tested and tried; and hence it was that he thought that the resolution was one which should meet with their acceptance. There might be cases in which the flax would bear a good appearance; there would be other cases in which, whilst it was sought to employ it on a large scale, it would not be found to be of any service whatever. There were cases in which there was yarn or flax suited for the medium or the light trades which would not be suited to the heavy, and so on with the others; and hence it was absolutely necessary to use great precaution in the adoption of improvements. These improvements required not only the flax, but the linen and yarn, to be tested—because it required the whole of the different stages of the article to be equally benefited to constitute the improvement. There was a great deal of ignorance afloat in regard to the flax plant; and it was from that ignorance resulted, most probably, the differences with regard to the value of improvements. Mr. Richardson then alluded to the matter of Schenck's process, which, while he approved of as a whole, he could not approve of as applied to certain fabrics. He concluded by seconding the resolution.

It was put and carried.

Mr. M'Neile said, he had a very long resolution, but he was not going to make a long speech. He could not say a word about flax, but he would like to say something about hemp. He was glad that the Limerick people were so well supplied with hemp that they did not want it all for their own customers. (Laughter.) They were indebted to Mr. Dargan for this hemp, and it was not the only instance in which he had benefited the country. He was glad that Mr. Dargan had not confined himself to the North, and he hoped that he would be of use to their friends in Limerick in other ways than providing hemp for them. (Laughter.) Mr. M'Neile then moved the appointment of the members of Committee.

Mr. **Bell**, of Abbeyleix, in seconding the resolution, mentioned that Lord de Vesci had commenced the culture of flax on his estates in the Queen's County, and that his experiment was going on remarkably well. He was certain that this crop would enable the tenants to pay their rents with more ease than any other crop, and his own experience during the last year had proved it.

Dr. **M'Kibbin** said that the Society had been complimented for the great deal of good it had done, and he was satisfied that those compliments were deserved; but he was equally satisfied that a vast amount of that good had been owing to the zealous and indefatigable labours of their worthy Secretary. He felt convinced that the vote of thanks to him would be seconded by every person in the room.

Mr. W. G. **Andrews** seconded the vote of thanks to Mr. MacAdam, which was carried amid loud applause.

Mr. F. **Filgate**, in moving that the Earl of Erne do leave the Chair, and that the Earl of Roden be called thereto, took occasion to allude to the deep interest that Lord Downshire took in the Society, and stated that his Lordship felt regret in not being able to attend—a feeling that would be diminished when he heard how ably his place had been filled by the Noble Earl who had presided that day, and when he learned the large attendance at the meeting of gentlemen connected with agriculture and commerce.

The motion was seconded and passed. Lord Roden took the Chair; a vote of thanks was moved and seconded to the former Chairman, whereupon

The **Chairman** said—I think it right, before putting the resolution, to state that there can be no second opinion as to the proposition which has now been submitted before me. I am also anxious to state the cause which brought us here this day, and which has afforded me the pleasure of attending this meeting. I live, at the present time, in a part of the country where I cultivate a large farm—upwards of 800 acres—all which is in my own hands, in the neighbourhood of Dundalk, and the soil of which I believe to be peculiarly favourable for the cultivation of flax. It was upon that account that I was anxious to come here, on the present occasion, in order that I might learn lessons at the hands of practical men—(hear, hear)—and I can bear testimony to the pleasure with which I have heard the observations made at this meeting. I have come here with the hope of hearing some remarks of practical utility, and I must confess that I have not been disappointed. I trust that I will carry home with me some of the lessons which I have heard here to-day to my own farm, where I may have an opportunity of carrying them into effect. I could only wish to have heard, even at greater length, those gentlemen who favoured us with practical observations. (Hear.) I only say, in addition, that no one, as an individual, here feels more than I do the obligation which is due to the merchants of Belfast for their exertions in support of this institution; and, as to his Excellency the Lord Lieutenant, the Earl of Clarendon, I tender him—as a member of the Society and anxious for the promotion of the objects of the Society, for his having procured the grant of 3,000*l.*—my sincere thanks; and I also feel thankful to the merchants and gentlemen of Belfast, as the promoters and originators of this most important movement. (Cheers.) I can only say that, so far as I am concerned, whatever assistance I am able to give, as an humble individual, shall be ever most cheerfully rendered. (Cheers.)

The Noble Earl then put the resolution, which was carried unanimously.

The meeting then separated.

RESOLUTIONS.

At the Tenth Annual General Meeting, held in the Society's Rooms, Commercial Buildings, Belfast, on Friday, 29th November, 1850,—the Right Honourable the Earl of Erne in the Chair,—the Annual Report of the Committee, and the Annual Statement of Accounts having been read by the Secretary, the following resolutions were unanimously agreed to:—

Moved by A. Shafto Adair, Esq., M.P.; seconded by R. J. Tennent, Esq., M.P., and resolved,

I.—"That the annual report now read be received and adopted, and that it be printed for circulation, with such other information as may appear advisable to the Committee."

Moved by the Lord Bishop of Down; seconded by W. S. Crawford, Esq., M.P., and resolved,

II.—"That the best thanks of the Society be presented to the Lord Lieutenant for the warm interest which his Excellency has always manifested in the progress of the Society."

Moved by Lord Dufferin; seconded by John Birney, Esq., and resolved,

III.—"That the thanks of the Society be given to the Committee, for their unremitting and successful exertions in carrying out the Society's objects."

Moved by Sir R. Bateson, Bart.; seconded by the High-Sheriff of Longford, and resolved,

IV.—"That the Society regards with peculiar satisfaction the present position which the subject of flax culture has assumed, and request the Committee will give their best aid to the movement so favourably begun.

Moved by Sir J. M. Stronge, Bart., M.P.; seconded by S. K. Mulholland, Esq., and resolved,

V.—"That, in consequence of the highly-favourable report on the patent steeping process, presented by the Committee, the Society recommends the general adoption of that system, as the best hitherto brought forward, affording, as it does, great inducements, both to gentlemen and tenant farmers, to cultivate flax extensively, since it avoids the trouble and risk hitherto attending the preparation of the fibre, and affords an immediate market for the crop when grown."

Moved by Edmund M'Donnell, Esq., D.L.; seconded by Jonathan Richardson, Esq., and resolved,

VI.—"That the Society highly approves of the caution which the Committee have hitherto used in delaying their sanction of new plans of treating flax, until their real merits have been ascertained by a rigorous examination; and that, in future, while courting suggestions, and impartially considering them, they shall be equally careful in subjecting them to test."

Moved by JOHN M‘NEILE, Esq., D.L.; seconded by WILLIAM BELL, Esq., J.P., and resolved,

VII.—“That the following be the list of office-bearers of the Society for the ensuing year :—*Patrons*—Her Most Gracious Majesty the Queen, and H.R.H. Prince Albert. *Vice-Patron*—His Excellency the Earl of Clarendon, Lord Lieutenant of Ireland. *President*—The Marquis of Downshire. *Vice-Presidents*—The Marquis of Hertford, the Marquis of Waterford, the Earl of Courtown, the Earl of Roden, the Earl of Erne, the Earl of Caledon, the Earl of Ranfurley, Viscount Newry and Morne, M.P.; Lord Rossmore, Lord Monteagle, the Lord Bishop of Down, Sir R. A. O'Donnell, Bart.; Sir J. M. Stronge, Bart.; Sir R. Bateson, Bart.; Sir W. Verner, Bart., M.P.; Colonel A. Knox Gore, Lieutenant of County Sligo; Sir Robert Kane, W. S. Crawford, M.P. ; A. Shafto Adair, M.P.; R. J. Tennent, M.P. ; the Very Rev. the Dean of Ross ; Edmund M‘Donnell, D.L., J.P. *Committee*—W. G. Andrews, J. B. Bankhead, R. H. H. Becher, the Rev. F. Blakely, John Borthwick, James Campbell, John Charters, John Sharman Crawford, Wm. Dargan, George Greer, Edmund Grimshaw, S. G. Fenton, John Hancock, John Herdman, Richd. Hull, Andrew Mulholland ; S. K. Mulholland, John M‘Master, Robert M‘Kibbin, M.D.; Richard Niven, John Preston, J. Temple Reilly, George Robinson, Jonathan J. Richardson, C. G. M. Skinner, Wm. Valentine, and Richard Walker. *Auditors*—John Charters, James Campbell. *Secretary*—James MacAdam, jun.”

Moved by ROBERT M‘KIBBIN, Esq., M.D.; seconded by W. G. ANDREWS, Esq., and resolved,

VIII.—“That the thanks of this meeting be given to the Secretary, for the very efficient and satisfactory manner in which he has conducted the business of the Society for the past year.”

(Signed) ERNE, *Chairman.*
JAMES MACADAM, JUN., *Secretary.*

On the motion of F. FILGATE, Esq., J.P.; seconded by J. S. CRAWFORD, Esq., J.P., the Earl of Erne having left the Chair, and the Earl of Roden being called thereto, the thanks of the meeting were given to the Earl of Erne, for his dignified and proper conduct in the Chair.

(Signed) RODEN, *Chairman.*
JAMES MACADAM, JUN., *Secretary.*

APPENDIX.

DIRECTIONS
FOR THE
PROPER MANAGEMENT OF THE FLAX CROP,

COMPILED BY THE COMMITTEE
OF THE
ROYAL SOCIETY FOR THE PROMOTION AND IMPROVEMENT OF THE GROWTH OF FLAX IN IRELAND.

THE following directions have been carefully arranged from the mass of information obtained by the Society and their agriculturists, during their ten years' experience in the improved system of management:—

SOIL AND ROTATION.

By attention and careful cultivation, good flax may be grown on various soils; but some are much better adapted for it than others. The best is a sound, dry, deep loam, with a clay subsoil. It is very desirable that the land should be properly drained and subsoiled; as, when it is saturated with either underground or surface water, good flax cannot be expected.

Without method, there cannot be success—different soils require a difference of rotation. In the best soils of Flanders, flax is grown in the third year of a seven-course rotation, or the fifth year of a ten-course rotation.

It is not considered generally advisable to grow flax more frequently than once in ten years: not because it exhausts the land more than any other crops, but because good *flax* cannot be had, at short intervals, on the same soil.* In Belgium, it invariably follows a corn crop—generally oats; and in this country, where oats is such a usual crop, the same system might be profitably pursued; but it must be understood, that it is only after oats following a green crop or old lea, and never after two or three succeeding crops of oats, which bad practice still prevails in some districts. It is a very general error among farmers, to consider it necessary that flax should follow a potato crop. Except on very poor soils, a better crop will be produced after grain, and the double benefit of the grain and flax secured. If old lea be broken up, and potatoes planted, followed by a grain crop, a very fine crop of flax may be obtained in the ensuing year.

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* The following rotation, which would bring flax once in ten years, has been proposed:—First year, potatoes; second, barley, laid down with grasses; third year, cut for soiling; fourth year, pasture; fifth year, flax; or the one-half might be better in flax, the other in oats, so that, with the return of the rotation, which would be in five years, the flax could be put on the ground which, in the last rotatory course, was under corn, throwing a range of ten years between the flax crops coming into the same ground.

A gentleman of much practical knowledge recommends the following as being the most profitable:—1. Oats after the grass and clover. 2. Flax pulled in August; then ploughed and harrowed in with two cwt. guano and two cwt. gypsum; then sown with rape. 3. Potatoes or turnips, well manured. 4. Wheat, sown in Spring, with clover and ryegrass. 5. Hay and clover. 6. Grazing. 7. Oats. 8. Flax and Winter vetches; guano, as before mentioned. 9. Turnips, well manured. 10. Barley, sown with ryegrass and clover. 11. Clover and hay. 12. Grazing. 13. Oats.

PREPARATION OF THE SOIL.

One of the points of the greatest importance, in the culture of flax, is by thorough-draining, and by careful and repeated cleansing of the land from weeds, to place it in the finest, deepest, and cleanest state. This will make room for the roots to penetrate, which they will often do to a depth equal to one-half the length of the stem above ground.

After wheat, one ploughing may be sufficient, on light, friable loam, but two are better; and, on stiff soils, three are advisable —one immediately after harvest, across the ridges, and two in Spring, so as to be ready for sowing in the first or second week of April. Much will, of course, depend on the nature of the soil, and the knowledge and experience of the farmer. The land should be so drained and subsoiled, that it can be sown in flats, which will give more evenly and much better crops. Subsoiling should not be done at a less interval than two years prior to the flax crop. This gives the land time to consolidate. But, until the system of thorough-draining be general, it will be necessary, after oats, to plough early in Autumn, to the depth of six or eight inches. Throw the land into ridges, that it may receive the frost and air; and make surface drains to carry off the rains of Winter. Plough again in Spring, three or four inches deep, so as to preserve the Winter surface for the roots of the flax. The Spring ploughing should be given some time before sowing, to allow any seeds of weeds in the land to vegetate, and the harrowing in of the flaxseed will kill them, and save a great deal of after weeding. Following the last harrowing, it is necessary to roll, to give an even surface and consolidate the land, breaking this up again with a short-toothed or seed harrow, before sowing, which should be up and down, not across the ridges or anglewise.

SOWING.

The seed best adapted for the generality of soils is Riga, although Dutch has been used in many districts of country, for a series of years, with perfect success. American seed does not generally suit well, as it is apt to produce a coarse, branchy stem. If used, it should be on deep, loamy soils. In buying seed, select it plump, shining, and heavy, and of the best brands, from a respectable merchant. Sift it clear of all the seeds of weeds, which will save a great deal of after trouble, when the crop is growing. This may be done by fanners, and through a wire sieve, twelve bars to the inch. Home-saved seed has produced such excellent crops, of late, that it is strongly recommended that every farmer should only sow, each year, as much foreign seed as would produce a sufficient quantity for his flax crop of the following season.* The thinner portion of the crop would be the best for this purpose, as, when flax grows thin, it produces much seed. This plan, besides the saving effected in the price of foreign sowing seed, would effectually secure the farmer from any danger of loss from fraudulently-made-up seed. It will be best, in most cases, to use the seed which is saved from this, in the following year, for feeding, or to sell it for the oil mills, although it often produces good crops. The proportion of seed may be stated at three and a-half imperial bushels to the Irish or Plantation acre; and so on, in proportion to the Scotch or Cunningham, and the English or Statute acre. It is better to sow too thick than too thin; as, with thick sowing, the stem grows tall and straight, with only one or two seed capsules at the top; and the fibre is found greatly superior, in fineness and length, to that produced from thin-sown flax, which grows coarse, and branches out, producing much seed, but a very inferior quality of fibre. The ground being pulverized and well cleaned, roll and sow. If it has been laid off without ridges, it should be marked off in divisions, eight to ten feet broad, in order to give an equable supply of seed. After sowing, cover it with a seed harrow, going twice over it—once up and down, and once across or anglewise; as this makes it more equally spread, and avoids the small drills made by the teeth of the harrow. Finish with the roller, which will leave the seed covered about an inch—the proper depth. The ridges should be very little raised in the centre, when the ground is ready for the seed, otherwise, the crop will not ripen evenly; and, when land is properly drained, there should be no ridges. The sowing of clover and grass seeds along with the flax is not advised, when it can be conveniently avoided, as these plants always injure the root ends of the flax. But carrots may be sown, in suitable soils, in drills, so that the person pulling the flax may step over the rows, which may be afterwards hoed and cleaned, and should have some liquid manure. A stolen crop of rape or Winter vetches, or of turnips of the stone or Norfolk globe varieties, may be taken, after the flax is pulled. Rolling the ground after sowing is very advisable, care being taken not to roll when the ground is so wet that the earth adheres to the roller.

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* The produce of seed averages about 12 bushels the Statute acre, so that the seed saved off one Statute acre would sow about five.

MANURE FOR THE FLAX CROP.

Recent chemical investigations have shewn that the fibre of flax does abstract from the soil certain matters, although not in so large a proportion as several other commonly cultivated crops. To supply to the soil all the matters which the entire plant requires, so as to leave the land in the same state of fertility as before, the following compound has been proposed as a manure, which may be sown broadcast on the land, prior to the last harrowing before sowing the flaxseed :—

FOR A STATUTE ACRE OF LAND.

		s.	d.
Muriate of Potash, 30lbs., ...	cost about	2	6
Chloride of Sodium (common salt), 28lbs., ...	"	0	3
Burned Gypsum, powdered, 34lbs., ...	"	0	6
Bone dust, 54lbs., ...	"	3	3
Sulphate of Magnesia (Epsom salts), 56lbs.	"	4	0
		10	6

WEEDING.

If care has been paid to cleaning the seed and the soil, few weeds will appear; but if there be any, they must be carefully pulled. It is done in Belgium by women and children, who, with coarse cloths round their knees, creep along on all-fours. This injures the young plant less than walking over it (which, if done, should be by persons whose shoes are not filled with nails.) They should work, also, facing the wind, so that the plants laid flat by the pressure may be blown up again, or thus be assisted to regain their upright position. The tender plant, pressed one way, soon recovers; but, if twisted or flattened by careless weeders, it seldom rises again.

PULLING.

The time when flax should be pulled is a point of much nicety to determine. The fibre is in the best state before the seed is quite ripe. If pulled too soon, although the fibre is fine, the great waste in scutching and hackling renders it unprofitable; and, if pulled too late, the additional weight does not compensate for the coarseness of the fibre. It may be stated, that the best time for pulling is, when the seeds are beginning to change from a green to a pale brown colour, and the stalk to become yellow, for about two-thirds of its height from the ground. When any of the crop is lying, and suffering from wet, it should be pulled as soon as possible, and kept by itself. So long as the ground is undrained, and imperfectly levelled before sowing, the flax will be found of different lengths. In such cases, pull each length separately, and steep in separate pools, or keep it separate in the same pool. Where there is much second growth, the flax should be caught by the puller just underneath the bolls, which will leave the short stalks behind. If the latter be few, it is best not to pull them at all, as the loss from mixture, and discoloration by weeds, would counterbalance the profit. If the ground has been thorough-drained, and laid out evenly, the flax will be all of the same length. It is most essential to take time and care to keep the flax even, like a brush, at the root ends. This increases the value to the spinner, and, of course, to the grower, who will be amply repaid, by an additional price, for his extra trouble. Let the handfuls of pulled flax be laid across each other diagonally, to be ready for the

RIPPLING,

Which should be carried on at the same time, and in the same field, with the pulling. If the only advantage to be derived from rippling was the comparative ease with which rippled flax is handled, the practice ought always to be adopted; but, besides this, the seed is a most valuable part of the crop, being worth, if sold for the oil mill, £3 per acre, and if used for feeding stock of all kinds, at least £4 per acre. The apparatus is very simple. The ripple consists of a row of iron teeth screwed into a block of wood. This can be procured in Belfast, or may be made by any handy blacksmith.* It is to be taken to the field, where the flax is being pulled, and screwed down to the centre of a nine-feet plank, resting on two stools. The ripplers may either stand or sit astride at opposite ends. They should be at such a distance from the comb, as to permit of their striking it properly and alternately. A winnowing-sheet must be placed under them, to receive the bolls as they are rippled off; and then they are ready to receive the flax just pulled, the handfuls being placed diagonally, and bound up in a sheaf. The sheaf is laid down at the right hand of the rippler, and untied. He takes a handful with one hand, about six inches from the root, and a little nearer the top, with the other. He spreads the top of the handful like a fan, draws the one-half of it through the comb, and the other half past the side; and, by a half-turn of the wrist, the same operation is repeated with the rest of the bunch. Some, however, prefer rippling without turning the hand, giving the flax one or two pulls through, according to the quantity of bolls. The flax can often be rippled, without being passed more than once through the comb. He then lays the handfuls down at his left side, *each handful* crossing the other, when the sheaf shall be carefully tied up and removed. The object of crossing the handfuls so carefully, after rippling, when tying up the beets for the steep, is, that they will part freely from each other, when they are taken to spread out on the grass, and not interlock, and be put out of their even order, as would otherwise be the case. If the weather be dry, the bolls should be kept in the field, spread on winnow-cloths, or other contrivance for drying; and, if turned from time to time, they will win. Passing the bolls first through a coarse riddle, and afterwards through fanners, to remove straws and leaves, will facilitate the drying. If the weather be moist, they should be taken in-doors, and spread out thinly and evenly on a barn floor or on a loft, leaving windows and doors open, to allow a thorough current of air, and turned twice a-day. When nearly dry, they may be taken to a corn kiln (taking care not to raise it above Summer heat), and carefully turned, until no moisture remains. By the above plan of *slow* drying, the seed has time to imbibe all the juices that remain in the husk, and to become perfectly ripe. If it be taken at once from the field, and dried *hurriedly* on the kiln, these juices will be burned up, and the seed will become shrivelled and parched, little nutritious matter remaining. In fine seasons, the bolls should always be dried in the open air, the seed thrashed out, and the heaviest and plumpest used for sowing or crushing. The light seeds and chaff form most wholesome and nutritious feeding for cattle. Flax ought not to be allowed to stand in the field, if possible, even the second day; it should be rippled as soon as pulled, and carried to the water as soon as possible, that it may not harden.

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* The best ripples are made of half-inch square rods of iron, placed with the angles of iron next the ripplers, 3-16ths of an inch asunder at the bottom, half-an-inch at the top, and 18 inches long, to allow a sufficient spring, and save much breaking of flax. The points should begin to taper 3 inches from the top.

WATERING.

This process requires the greatest care and attention. River water is the best. If spring water has to be used, let the pond be filled some weeks, or months, if possible, before the flax is put in, that the sun and air may soften the water. That containing iron or other mineral substances should never be used. If river water can be had, it need not be let into the pond sooner than the day before the flax is to be steeped. The best size of a steep-pool is 12 to 18 feet broad, and 3½ to 4 feet deep. Place the flax loosely in the pool in one layer, somewhat sloped, and in regular rows, with the root end underneath; the tie of each row of sheaves to reach the roots of the previous one; cover with moss sods, or tough old lea sods, cut thin, laid perfectly close, the sheer of each fitted to the other. Before putting on the sods, a layer of rushes or ragweeds is recommended to be placed on the flax, especially in new ponds. As sods are not always at hand, a light covering of straw may do, with stones laid on it, so as to keep the flax just under the water; and as the fermentation proceeds, additional weights should be laid on,—to be removed as soon as the fermentation ceases, so as not to sink the flax too much in the pool. Thus covered, it never sinks to the bottom, nor is affected by air or light. A small stream of water, allowed to run through a pool, has been found to improve its colour. In this case, if the pools are in a line, the stream should be conducted along the one side, and run into each pool separately, and the water of each pool run off, along the opposite side, in a similar manner. It will be sufficiently steeped, in an average time, from eight to fourteen days, according to the heat of the weather and the nature of the water. Every grower should learn to know when the flax has had enough of the water, as a few hours too much may injure it. It is, however, much more frequently *under*-watered than *over*-watered. The best test is the following:—Try some stalks of average thickness, by breaking the *shove*, or woody part, in two places, about six or eight inches apart, at the middle of the stalk; catch the broken bit of wood, and if it *will pull freely out, downwards, for that length, without breaking or tearing the fibre, and with none of the fibre adhering to it,* it is ready to take out. Make this trial every six hours, after fermentation subsides, for sometimes the change is rapid. Never lift the flax roughly from the pool, with forks or grapes, but have it carefully handed out on the bank, by men standing in the water. It is advantageous to let the flax drain twelve to twenty-four hours, after being taken from the pool, by placing the bundles on their root ends, close together, or on the flat, with the slope; but the heaps should not be too large, otherwise the flax will be injured by heating.

Within the last two years, a system of steeping has been introduced in Ireland, which is calculated ultimately to supersede the usual mode. It is effected by placing the flax, after pulling, drying, and beating off the seed (as in the Courtrai system) in vats filled with water, and heated by steam to an average temperature of 90 degrees. By this system the fibre is more uniformly watered, and not at all impaired in strength. The quality, where comparative trials have been made, has always turned out superior to what is steeped in the ordinary way. This system is protected by patent, and authorization to adopt it must be had from the patentee.*

SPREADING.

Select, when possible, clean, short, thick pasture ground for this operation; and mow down and remove any weeds that rise above the surface of the sward. Lay the flax evenly on the grass, and spread thin and very equally.

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* By addressing a communication to Messrs. Bernard & Koch, Newport-Mayo, or Belfast, the terms may be ascertained, with full particulars of the apparatus required.

If the directions under the head of rippling have been attended to, the handfuls will come readily asunder, without entangling. Turn it two or three times while on the grass (with a rod about eight feet in length, and an inch and a-half in diameter), that it may not become of different shades, by the unequal action of the sun, which is often the case, through inattention to this point. Turn it when there is a prospect of rain, that the flax may be beaten down a little, and thus prevented from being blown away.

LIFTING.

Six to eight days if the weather be showery, or ten to twelve if it be dry, should be sufficient on the grass. A good test of its being ready to lift is, to rub a few stalks from the top to the bottom; and, when the wood breaks easily, and separates from the fibre, leaving it sound, it has had enough of the grass. Also, when a large proportion of the stalks are perceived to form *a bow and string*, from the fibre contracting and separating from the woody stalk. But, the most certain way is, to prove a small quantity with the handbreak or in a flax mill. In lifting, keep the lengths straight, and the ends even, otherwise great loss will occur in the rolling and scutching. Tie it up in small bundles; and, if not taken soon to be scutched, it will be much improved by being put up in small stacks, loosely built, with stones or brambles in the bottom, to keep it dry, and allow a free circulation of air. Stacks built on pillars would be the best.

DRYING,

By fire, is *always most pernicious*. If properly steeped and grassed, no such drying is necessary; but, to make it ready for breaking and scutching, exposure to the sun is sufficient. In some districts, it is put to dry *on kilns*, in a damp state, and is absolutely burned before it is dry, and the rich oily property of the flax is always greatly impaired. On this point, the Society can scarcely speak too strongly, as the flax is either destroyed, or rendered not worth one-half of what it would be, if properly dried.

BREAKING AND SCUTCHING,

If done by hand, should be on the Belgian system, which is less wasteful than that practised in Ireland. If by milling, the farmer will do well to select those mills in which the improved machinery has been introduced. The Society would also recommend, that the farmer should endeavour to have his flax scutched by a mill-owner who pays his men by the day, and not by the stone, even if it should cost him higher in proportion; the system of paying the scutchers by the stone rendering them more anxious to do a large quantity in the day than to produce a good yield from the straw.

THE COURTRAI SYSTEM.

This is the mode in which flax should be saved for steeping on Schenck's hot-water system. It requires to be very carefully done, as inattention will reduce the value of the straw, and yield inferior fibre. The flax stems should be put together in bunches, about one-half larger than a man can grasp in one hand, spread a little, and laid on the ground in rows after each puller; the bunches laid with tops and roots alternately, which prevents the seed-bolls from sticking to each other in lifting. It should be stooked as soon after pulling as possible, and never allowed to remain over night unstooked, except in settled weather. The stooking should go on at the same time as the pulling, as, if flax is allowed to get rain, while on the ground, its colour is injured. A well-trained stooker will put up the produce of a Statute acre, or more, in good order, in a day, with two boys or girls to hand him the bunches. The flax should be handed with the tops to the stooker. The handfuls, as pulled, are set up, resting against each other—the root ends spread well out, and the tops joining like the letter A. The stooks are made eight to ten feet long, and a short strap keeps the ends firm. The stooks should be very narrow on the top, and thinly put up, so that they may get the full benefit of the weather. In six or eight days, at most, after being pulled, the flax should be ready for tying up in sheaves of the size of corn-sheaves. It is then ricked, and allowed to stand in the field until the seed is dry enough for stacking. To build the rick, lay two poles parallel on the ground, about a foot asunder, with a strong upright pole at each end. The flax is then built, the length of a sheaf in thickness or breadth. The bottom poles should be laid North and South, so that the sun shall get at both sides of the rick during the day. In building, the sheaves should be laid tops and roots alternately, built seven to eight feet high, and finished on the top by laying a single row of sheaves lengthwise, or across the others, and then another row as before, but with the tops all the same way, which gives a slope to throw off rain, and finished by putting on the top a little straw, tied with a rope. In this way, if properly built, it will stand secure for months. It can be stacked at leisure, or put in a barn, the seed taken off during the Winter, and the flax steeped in the following May; or it may be kept stacked, without receiving any injury, for two or three years, or even longer.

MR. WARNES'S (OF TRIMINGHAM) SYSTEM OF BOX-FEEDING.

Summer.—Ryegrass and clover, or any other green crop, cut into chaff of about an inch long, with the addition of ground linseed made into compound. Winter.—Seven-eighths straw—one-eighth hay, with turnip tops or wurzel leaves cut into chaff, with the addition of linseed as above. *To make the compound,* fill the furnace with water to within six inches, and, when boiling, strew by hand one-fifth of linseed meal to four-fifths of water, a boy stirring the meal in, till it is well mixed—(damp the fire); let the mucilage simmer about five or six minutes, when it will become a strong jelly. Into a large tub put about three bushels of the chaff, adding enough of the mucilage to wet it; mix and ram well down, then add more chaff, &c., mixing and ramming down every three baskets. The compound is then covered over, and, in about two hours, the mucilage being absorbed by the chaff, may be given to the cattle. If it is wished to *push the cattle on,* sprinkle a small proportion of the meal of barley, or other corn, upon each layer of the chaff and mucilage, also Swedish turnips, carrots, or wurzel, cut small, may be added, to give the compound a flavour. Altogether, the above compound will be found, at the present juncture, extremely economical for *fattening,* rearing, or maintaining store stock. Directions for Feeding. Summer.—(*At five in the*

Morning and Three in the Afternoon.)—Give each beast about half-a-bushel of the compound, feeding the remainder of the day with chaff. Water once a-day. WINTER.—(*Morning, Five o'clock.*)—Begin with half-a-peck of the compound to each beast; continue this food till the beasts are nearly satisfied. (*At Seven and Nine.*)—Feed with half-a-bushel of cut Swedish turnips to each, at twice. (*Eleven.*)—A feed of the compound. (*Afternoon, at One and Three.*) —As many Swedes as the beasts will eat, *a little at a time.* (*Six.*)—A good feed of compound, leaving for the night. The boxes or sheds in which the cattle are kept, must be sparingly littered twice a-day, and cleaned out when full. Food to be given a *little* at a time. UTENSILS.—An iron furnace, to hold about forty gallons; an iron stirrer (like a small mashing stick); an iron bowl, with a handle; a linseed crusher—tub or stone cistern of about 100 gallons—wooden rammer; a bushel basket—chaff cutter—turnip cutter; a fork, with four flat prongs; a common bucket, with iron handle; a skip or box to hold about a peck; a bin, with partitions for linseed before and after crushing. In fixing the boiler, it should have a curb of wood, six inches deep, sloping back; this will prevent the mucilage boiling over. [For directions to make compound of grain, and other particulars, see Mr. Warnes's book, to be had of all booksellers.]

VISIT
OF
HIS EXCELLENCY THE EARL OF CLARENDON,
LORD LIEUTENANT OF IRELAND, TO BELFAST.

On 14th September, 1850, the Lord Lieutenant arrived in Belfast, for the purpose of inspecting the various departments of flax preparation, and the linen manufacture.

VISIT TO THE LINEN-HALL.

His Excellency having intimated his intention to visit the Linen-hall, and there receive the address of the Flax Society, a large party of ladies and gentlemen were assembled in it to receive him. Among those present were the following Vice-Presidents of the Society:—The Bishop of Down, the Earl of Erne, Sir James M. Stronge, Bart., Mr. W. S. Crawford, M.P., and the Dean of Ross. There were also the following members of Committee, who wore a blue ribbon at the button-hole of their coats, with medal attached, commemorative of her Majesty's visit to the Hall:—Messrs. J. S. Crawford, A. Mulholland, John Herdman, S. K. Mulholland, Dr. M'Kibbin, Rev. F. Blakely, John Charters, Jonathan J. Richardson, John Borthwick, James Campbell, Richard Hull, C. G. M'G. Skinner, John Preston, John Hancock, J. Temple Reilly, and the Secretary. Many other members of the Society were in the library, where the address was presented.

His Excellency, who arrived about half-past one o'clock, and was hailed with loud cheers, as well by the people outside as by the gentlemen in the Hall, the ladies also exhibiting their respect after the usual manner, was received at the entrance by Mr. J. F. Ferguson and other members of the Hall Committee, by whom he was conducted to the library. There Mr. Crawford, M.P., introduced to him the Vice-presidents and Committee of the Flax Society. When Mr. S. K. Mulholland was presented, his Excellency said he was happy to meet, in this place, a gentleman to whose exertions he believed was chiefly owing the foundation of a Society which had been of such value to the country. Mr. Mulholland thanked his Excellency for the handsome compliment he had paid him, in alluding to the part he had taken in the management of the Society, and said that although he and others had had something to do with the nursing of the bantling, it was through his Excellency's fostering care that it had now assumed so vigorous a growth.

Mr. Crawford, M.P., as the Vice-President who had been deputed to read the address, proceeded to do so, as follows:—

"*To his Excellency George William Frederick Earl of Clarendon, K.G., G.C.B., Lord Lieutenant General and General Governor of Ireland.*

"May it Please your Excellency,—We, the members of the Royal Society for the Promotion and Improvement of the Growth of Flax in Ireland, are proud to hail your Excellency's arrival in Belfast, and most heartily express our satisfaction at the visit of a nobleman whose exertions on behalf of this country have added fresh lustre to his distinguished station as representative of her Most Gracious Majesty the Queen.

"When we consider the unprecedented combination of difficulties which has occurred during your Excellency's Viceroyalty, we admire the superior ability which has enabled you to surmount them, with honour to yourself and safety to the country.

"In the fostering spirit with which your Excellency has aided this Society, we recognise the extended views of the Statesman, looking into the future, and anticipating the vast benefits which must arise from rendering available the sources of wealth with which this country abounds; and we gratefully acknowledge that it is mainly owing to the substantial assistance afforded by Government, on your Excellency's recommendation, that the Society has been enabled to extend its operations to the South and West of Ireland, and to diffuse that information and instruction which, we are satisfied, has been of essential service to those districts.

"We have long been persuaded that, in the cultivation of flax, a great mine of wealth exists in this country, to which we have laboured to direct the attention of its people. We have pointed to the vast sums of money which are annually sent to foreign countries for the products of the flax plant, and have shewn that the soil and climate of Ireland are eminently calculated to produce an almost unlimited supply. We have called attention to the fact that its production will not only retain this wealth in the country, but will also employ the population, who are now driven to foreign lands, to seek that field for their labours which would thus be abundantly afforded to them at home. It is a source of peculiar satisfaction to us, that your Excellency has so fully recognised the value of these views, and has so frequently advocated them.

"We cannot omit this opportunity of acknowledging, in the warmest manner, in common with the people of Ulster generally, the lively interest you have taken in the prosperity of the different branches of the Irish linen trade, and the exertions you have made for the removal of restrictions and the modification of injurious tariffs, in order that our industrial products may enter into fair and open competition with those of other countries.

"Your comprehensive views have extended, also, to artistic embellishment, by promoting the formation of Schools of Design, where the taste of the youth of Ireland may be properly directed and cultivated, and by which our manufacturers may be enabled to give the most finished ornament, without being dependent on the decorative skill of foreigners.

"In conclusion, while reiterating the expression of our gratitude for your Excellency's warm and powerful advocacy of our views, and your constant endeavours to inculcate habits of industry and self-reliance among the people of this country, which have so greatly tended to aid our efforts, we trust that we may have future opportunities of receiving you in Belfast, where we know that your exertions for the improvement of Ireland are fully appreciated;

and we sincerely hope your life may be long spared, to assist in guiding, by your wisdom, the councils of this great empire.

"Wm. Sharman Crawford, M.P., Chairman."

His Excellency then read the following reply, and, in doing so, he dwelt with such emphasis on the various points to which he referred, that it was evident he had both deeply studied the subject and was warmly interested in it:—

"Gentlemen,—I beg to thank you for your kind welcome to Belfast, and to assure you that nothing can be more gratifying to me, as the representative of our gracious Sovereign in Ireland, than to be considered instrumental in carrying out the benevolent wishes of her Majesty towards all classes of her Irish subjects.

"Ever since my arrival in this country, I have observed with pleasure the meritorious efforts of your Society to extend the growth of flax by diffusing the information and instruction necessary for its proper cultivation, and towards this national object I thought it my duty to procure for the Society the assistance of which it stood in need. The great and growing importance of flax in Ireland cannot, in my judgment, be over estimated; and the more we consider it in its agricultural, manufacturing, and commercial bearings on our welfare, the more apparent will, I think, become the necessity and advantage of its extended cultivation in a country whose soil and climate are so peculiarly adapted to its production. I rejoice, however, to think that attention is now generally turned to this subject, and at a moment when flax is most likely to be remunerative to the grower. The demand for our linen manufactures is rapidly rising, and the supply of cotton is not only deficient, but, owing to various circumstances, I fear that this supply will, henceforward, not be equal to our demand, and that we cannot reckon upon the quantity of cotton we require at the prices which will enable us to extend our manufactures, or even to keep them up to their present amount. But, by extending the growth of flax, we may not only benefit the manufactures of Ireland by a more abundant supply of raw material, but we may also furnish the manufacturers of cotton—not with a substitute, but with an auxiliary to cotton—with a material which may liberate cotton from some of its present uses.

"The agriculturist has thus a double market for this production, and one which never can be overlooked; and if this vast field for his industry be turned to proper account—if he rears more cattle, feeds them upon the green crops, which are more luxuriant in Ireland than in any other country, and fattens them upon flaxseed—he will be able to manure and fertilise his land, and impart to it a value it has not hitherto reached, while the agricultural and manufacturing interests will thus be brought into harmonious action with each other.

"The spread of civilisation, and the facility with which the people of different countries now communicate with each other, are daily giving rise to new ideas and new wants; textile fabrics will soon rank among the first necessities of the world, and to obtain them better and cheaper will be the demand of millions who are now unable to afford the use of them. Much progress has already been made, for, owing to the reduction of prices caused by improved machinery and more economical processes, our cotton manufactures have increased 1,284 per cent. in the present century, while linen manufactures of all kinds have, within the last eighteen years, fallen 50 per cent. in price, and the manufactures have increased in proportion; but enough has not been done towards producing from the soil of Ireland this raw material for Irish manufacture, which may be grown better and more cheaply here than abroad—(applause)—and we know that not only a sum of four millions a-year is paid for foreign flax, but I find that, in the last ten years, the enormous quantity of 13,650,000 cwts. of flax, 9,300,000 qrs. of flaxseed, and nearly 700,000 tons of oil-seed cake have been imported. I have entered into these details, as I was anxious to state the reasons why I attach so much importance to the growth of flax, and why I think it should engage the attention of all who have at heart the agricultural and manufacturing progress of Ireland. (Applause.)

"From the obstacles we have ourselves experienced in adopting a liberal and enlightened system of commerce, you may judge of the difficulty that exists in inducing foreign Governments to abandon their prohibitory or protective tariffs; but I cannot doubt that our example must be followed—(hear)—and in the meanwhile, you may rest assured that her Majesty's Government will use their best exertions to remove or lessen the duties that press injuriously upon our production in foreign countries. (Hear, hear.)

"It was a matter of great satisfaction to me to aid in the establishment of a School of Design in Belfast, which, I feel sure, will realise the anticipations we have formed of its usefulness. I beg you to accept my thanks for your kind expressions towards myself, on the present occasion, which, I trust, will not be my last visit to this great emporium of Irish industry." (Loud and repeated cheers.)

His Excellency, immediately after receiving the address of the Royal Irish Flax Society, walked along the quadrangle of the Hall, accompanied by the Lord Bishop of Down, the Earl of Erne, the Committees of the Hall and Flax Society, and a vast number of gentlemen of the town and country, to the establishment of Messrs. S. G. Fenton & Co., where his Lordship was received by Mr. Lowry and Mr. Grogan (in the unavoidable absence of Mr. Fenton, in England), and immediately conducted by these gentlemen into the private office, in which her Majesty received two addresses on the memorable occasion of her visit to the Hall, in 1849, a memorial of which is suspended from the wall, underneath the portraits of the Queen and Prince Albert. Attended, as he had entered, his Excellency was now introduced into the several departments of this magnificent establishment, and examined, with the greatest interest, the various specimens of yarn submitted to his inspection; and, making many minute inquiries, listened with the deepest attention to the explanations given. It would be difficult to convey to strangers any adequate description of it, together with the celebrated linen department of Messrs. Sadler, Fenton, & Co., which occupies two floors of 517 feet—is intersected with a great number of arches, and presents long vistas of handsome arcades. His Excellency in passing through these establishments, would be able to form some conception of the magnitude and importance of the linen trade of Ireland.

Messrs. Sadler, Fenton, & Co.'s splendid and beautiful stock, adapted for the home and foreign trade, was arranged with the greatest judgment and taste; and, as a large order was in course of preparation, his Lordship had an opportunity of observing the varied styles in which goods are ornamented for foreign markets. On his Excellency's attention being directed to the cambric handkerchiefs, the manufacture of Mr. James Malcolm, of Lurgan, Mr. Grogan observed that the low qualities were furnished in quantities to the English drapers; but the French still excelled us in production of the finer qualities. On his Lordship asking the reason of this, Mr. Grogan replied that the French devoted more care and attention to the finer descriptions than we had done; but he doubted not that we should speedily overtake our rivals in the production of the very finest qualities of this article. After spending nearly half an-hour in this establishment, his Excellency was conducted to the private office of Mr. Fenton, where he left his autograph in the visiter's book.

The *cortége* then left the Linen-hall, the Mayor's carriage preceding that of his Excellency, which was followed by five private carriages containing the office-bearers of the Royal Flax Society, who had the honour of arranging the objects to be visited for the rest of the day, in illustration of the different processes of the linen manufacture.

VISIT TO MESSRS. MULHOLLAND'S MILL.

His Excellency was, at three o'clock, received at the mill by Messrs. Andrew and S. K. Mulholland, who were in waiting to conduct him through the establishment. Her Majesty's representative was welcomed with loud and protracted plaudits as he crossed the principal entrance. A few flags floated from the pillars of the gates, and from commanding positions in the quadrangle of the building. Save these, the concern wore its every-day aspect, and business was carried on, in all the departments, as if the representative of Royalty had been at the Viceregal-lodge, in the Phœnix-park. The intentions of his Excellency, in visiting the mill, and in witnessing the immense variety of processes undergone by the flax plant, up to the point where the fibre is produced in the market, in the form of yarns of all qualities and degrees of fineness, were thus realised much more effectually than they could have been by the adoption of a different course.

A description of the immense and magnificent establishment of the Messrs. Mulholland is not necessary. Seen every day, its gigantic proportions, the extraordinay amount of labour which it affords, and the still more extraordinary manufactures which its produces, have ceased to excite the astonishment of our fellow-townsmen; and its business transactions with the leading merchants of this country, of the sister kingdom, of the entire Continent of Europe, and, indeed, of almost every commercial port in the globe, having secured for it a standing and a name which require not the aid of mere complimentary remarks to establish its relative superiority. Though a description of the building itself might be deemed superfluous, there are a few facts in connexion with it which, it may be taken for granted, are not generally known, and which are likely to prove interesting. There are, at the present time, engaged in the flax-spinning trade in Belfast and its vicinity, about thirty mills, which employ thousands of the population. The oldest and principal one of them is that which the Lord Lieutenant favoured with his presence. The Messrs. Mulholland were the first to introduce, in Belfast, the spinning of linen yarn by machinery; and some idea may be formed of the success of the experiment, when we state that their establishment affords constant employment to upwards of 1,200 persons; that its annual expenditure, in wages alone, amounts to about £20,000; and that it consumes, annually, about one thousand tons of flax, producing about 450,000 bundles of yarn, at an estimated value of from £100,000 to £110,000. These figures, though large, represent merely one department of the manufacturing enterprise of the spirited proprietors. The Messrs. Mulholland are extensive spinners—they are still more extensive manufacturers, as they manufacture more than they spin. From the simplest and roughest elementary process, to the completion by bleaching, printing, ornamenting, and exporting, all is carried out by themselves. The direct and indirect employment thus given by these gentlemen is enormous, and, as it may be said to be confined to our own countrymen, 15,000 of whom, within a circuit of fifty miles round Belfast, are engaged by them as weavers, the social and national advantages conferred cannot be too highly estimated. The following figures will shew the transactions of the establishment in the linen manufacture, during the six months, ending June last, the first column pointing out the receipts of webs of linen cloth—each web averaging sixty yards—during the period mentioned, and the second the receipts of bleached cloth, during the same period:—

BROWN.		BLEACHED.	
January, ...	7,576	January, ...	8,565½
February, ...	8,093	February, ...	9,539
March, ...	9,515	March, ...	13,549½
April, ...	7,506	April, ...	10,896
May, ...	11,323	May, ...	11,717
June, ...	11,624	June, ...	16,015
	55,637		70,282

With the above bare statement of facts, which themselves abundantly attest the extraordinary character of the Messrs. Mulholland's concern, we resume our narrative of his Excellency's visit. Having passed through the main entrance, the Viceroy was conducted across a large area to the flax store, an immense fire-proof building, in which were contained about 600 tons of flax, principally the produce of foreign countries—a circumstance with which the worthy proprietor did not fail to make his Excellency acquainted, adding his own views as to the superior character of the Irish plant, and his regret that it is not more generally and more extensively cultivated. Several tables were laid out with specimens, in the rough state, of Irish, French, Dutch, Flemish, Riga, and Egyptian flax, for the inspection of the noble visiter, who examined them evidently most minutely. From this department his Excellency was next ushered, by a short passage, into the roughing rooms, and thence into the hackling and carding rooms. With the latter his Excellency was evidently much gratified, and not a little astounded, especially at the amazing operations of the self-acting hackling machines. He was then conducted to the preparing room, which occupies the entire basement story of the mill, and engages the attention of about 120 females. The immense display of machinery, kept in the cleanest possible condition—the quick play of the spreading and drawing-frames, and the quicker movements of the roving-frames, brought to a stand-still, as if in a minute, by the hands of a mere child, and in another moment, as if by magic, driven into the highest velocity, seemed not a little to excite the curiosity of his Excellency, who closely scrutinised the entire operations. The noble Earl was then conducted through the four immense spinning-rooms, with the neatness, regularity, and order of which he expressed himself greatly surprised He was thence led, by a winding stair, to the reeling-room, and from thence again to the engine-room, a magnificent building—quite a model in its way, and kept remarkably clean. In this apartment are two beautiful and powerful engines—one of them, a condensing engine, manufactured by Messrs. Coates & Young, of Belfast, and said to be the largest and best in Ireland. It is of 70-horse power; indicates 202; has a 22 feet 6 inches walking-beam, a 23 feet 4 inches connecting-rod, a 45 inch cylinder, and a stroke of upwards of 7 feet. The second engine, which is also an exceedingly handsome one, was manufactured by the Messrs. Ormerod & Co., of Manchester, is of 68-horse power, and indicates 150. His Excellency, who expressed himself in terms of the highest admiration of this department of the extensive premises, was next conducted through the yarn store, in which, having been told that the yarn was boiled in alkali before being manufactured, he inquired to what use the lye was afterwards appropriated. He was told that it was not afterwards used, when he pointed out its value as manure. He was then led through the web store, and other buildings, to the lapping rooms, where a large number of tables were tastefully laid out with linens of the richest description, in every variety of fold and ornament, and ready for shipment to the foreign markets. These tables bore each the peculiar characteristics of folding demanded by the countries to which they are consigned. His Excellency inspected each minutely, and expressed his great satisfaction with the arrangements and designs. In the white lapping room, which contained a very fine display of linens, his Excellency particularly noticed the new style of plaited shirt-fronts, woven in the the manufacture of Mr. Lindsay, of Ashfield, Dromore, and some of which were presented to his Royal Highness Prince Albert, on the occasion of the Royal visit to Belfast. These beautiful articles, which display in a remarkable manner the perfection to which the linen manufacture has been brought, arrested the attention and admiration of all in the room. On leaving the concern, his Excellency highly complimented the proprietors.

CREGAGH.

His Excellency arrived at Cregagh at half-past four, and was received by Messrs. Bernard, Koch, & Fiers, the proprietors. The seeding process was first shewn to his Excellency, by which the seed is separated from the plant. The machine which performs this is very simple, but very effective, and can work from four to five tons of flax per day, with five or six attendants. The quality of the flaxseed of this year's growth appeared to be exceedingly good. His Excellency particularly inquired if the fibre was as good when the plant had been allowed to mature seed like that. He was gratified to learn that by the patent steeping process the quality of the fibre was made as fine as when the seed was not preserved. The steeping-house was next visited containing twelve large oval vats, which shewed the various stages of the process of steeping, some being in full fermentation, some only beginning to get heated. After steeping, the flax is taken to open sheds, where it is dried. His Excellency examined the whole with great attention, and shewed, by his remarks, that he was well acquainted with the usual method of preparing flax; he expressed his gratification at seeing improvements which must tend strongly to the extension of flax cultivation. He was taken to the scutching-mill, where a new self-acting scutching-machine, made at the Soho Foundry, was at work, and appeared to work satisfactorily. His Excellency expressed his warmest wishes for the success of this establishment, and for the speedy extension of the system all through Ireland. On Friday morning, a web of brown linen, made from some Cregagh patent flax, and woven by Mr. W. Craig, on his power-looms, was shewn to his Excellency, who was pleased to express much satisfaction at seeing the superior quality of that fabric. His Excellency, before leaving, inscribed his name in the visiters' book.

VISIT TO GLENMORE.

His Excellency having intimated his desire to pay a visit to the premises of Messrs. Richardson, at Glenmore, immediately on returning from Cregagh to Belfast, proceeded to the Ulster railway station, where a special train was in readiness to convey him to the extensive bleach-works of Messrs. Richardson, Sons, & Owden, at Glenmore, near Lisburn, which arrived opposite the works in about eight minutes from the time of starting. A platform had here been erected for the occasion by the side of the railway, covered with fine sheeting; and over the temporary entrance into the green a handsome arch had been thrown, tastefully decorated with flowers. From the platform, which was erected on a ridge directly overlooking the green, a beautiful and extensive prospect was obtained of the surrounding country, embracing the valley to Belfast on the left, the County Down hills in the distance, and extending to Hillsborough on the right—the extensive bleaching grounds in front, divided by the River Lagan, and covered with the snow-white fabrics, appearing, under a serene sky, to singular advantage.

On alighting from the carriage, his Excellency was received with loud plaudits by a numerous party of gentlemen and ladies, who had been here waiting his arrival. His Excellency and suite, conducted by Messrs. Jonathan, Joshua, and William Richardson, then proceeded through the bleach-grounds, which were covered with various descriptions of linens, damasks, cambric handkerchiefs, &c.; and, passing the large filtering dams reached the boiling-house, where his Excellency examined brown linen going through the first process of steeping, and afterwards boiling in British alkali. From thence the party proceeded to the washing mills and rubbing machinery, and the buildings in which the various other processes are carried on, his Excellency making many inquiries as he proceeded. The party next visited the starching and blueing-houses.

His Excellency's time was too limited to admit of his being conducted through the mechanic workshops, where, we understand, the most of the machinery required by this enterprising firm is manufactured on the premises.

Four carriages being in waiting, his Excellency and suite next proceeded to the finishing works belonging to the same firm, at Millbrook, in the immediate vicinity of Lisburn, where they were shewn the various processes of drying and beetling linen and finishing cambric handkerchiefs. His Excellency was next conducted through the room containing the brown goods, as received in the rough state. In the course of his inspection his Excellency made many minute inquiries relative to the different processes and operations, and expressed himself much pleased with all he had witnessed. At this place a very large water-wheel and a powerful steam-engine were working in concert in driving the various machinery. The special train was in waiting at the Lisburn station, to convey his Excellency back to Belfast, where he arrived about a quarter past six, having been absent only fifty minutes, in which time he travelled sixteen miles, two of them in his carriage, and inspected the whole of this extensive concern—an amount of despatch which shews the facilities for travelling afforded by railway communication.

PARTICULARS

OF THE

FLAX CROPS OF FIFTY-ONE FARMERS,

IN THE NEIGHBOURHOOD OF NEWRY, COUNTY DOWN, 1850.

FOR the following table the Society is indebted to Mr. William Dawson, of Bessbrook, near Newry, and was accompanied by the following remarks:—

Bessbrook, *27th of* 11*th Month*, 1850.

I send thee herewith an account of the management of flax by fifty-one farmers, stating every particular respecting soil, labour, &c., &c.; and, although it is acknowledged by all to have been a very unfavourable season for the crop, the profits of some have been large, yet to others it has been a losing business; however, thou wilt observe that the average gain has been 7*l.* 1s 4½d per acre. I have been making particular inquiry into the cause of the great failure in some few cases, some of which were;—sowing immediately after deep ploughing, or digging with the spade, which left the ground too open underneath, so that the drought got down; not having the ground well harrowed and rolled, before sowing, to settle it pretty firmly down, and the surface at same time not being sufficiently fine. If the surface is fine, although firm underneath, rolled before sowing, and lightly rolled after, and gentle showers succeed, so that the flax comes up nearly at the same time (as a second or after growth is worth little), there is a prospect of a fair crop; but, should very heavy rain come on, immediately after sowing, so as to run the mould into a crusty state, it should, if possible, be broken before the flax comes up, either by gentle harrowing or rolling. Some crops have been a total failure by not attending to this. I inquired particularly about watering and grassing, as it is of immense importance, when both are sufficiently done. After being in the water five or six days, it should be examined. If the reed breaks quite short, as if it was rotten, and if it feels quite soft when pressed between the finger and thumb, and very freely parts from the fibre (flax), then it is sufficiently watered. No. 1 told me, when the fermentation ceased, and the flax settled down in the water, he took all the stones (or pressure) off, to give it liberty to rise, so that it might not be so much pressed together, which he thought was much in its favour. He kept it so long in the water that some of his neighbours thought he would injure it. It is time to lift off the grass when the fibre, *of itself,* parts freely from the reed (or shove), which should feel soft, and very easily separate when rubbed in the fingers. The great difference of time it has to be kept in the water and on the grass cannot be accounted for. Notwithstanding the unfavourable season for flax, no crop will pay so well. Thou wilt observe that the farmers are not saving seed, as it requires extensive loft-room; for the wetness of our climate makes it dangerous to expose it to the sun; and it is generally thought that by letting the seed sufficiently ripen injures the flax. How far this is the case I cannot conjecture.

I don't know whether thou wilt set any value on the information contained in these papers; however, receive them as thou mayest, I shall rest satisfied, and am thy friend,

WILLIAM DAWSON.

P.S —One farmer was offered a price for his flax of 13s per stone, which he refused taking. He had, off two Irish acres, 122 stones, which would, at the price offered, amount to 79*l.* 6s.

THE PROBABLE EXPENSE OF ONE IRISH ACRE OF FLAX.

Two ploughings—4 days, at 7s per day,	£1	8	0
Harrowing—1 day,	0	7	0
Rolling before sowing—half-day horse,	0	1	6
Cost of seed—3½ bushels,	2	5	0
Buying seed—man and horse,	0	3	0
Sowing—half-day of man,	0	0	6
Rolling after sowing—half-day horse,	0	1	6
Weeding—10 days women, at 8d per day,	0	6	8
Pulling—10 days women, at 8d per day,	0	6	8
Tying—1 man,	0	1	0
Rush Ties,	0	3	0
Drawing to, and covering in, water—1 horse and 3 men,	0	5	0
Drawing from water—1 horse and 3 men,	0	5	0
Spreading on the grass—8 days women, at 8d per day,	0	5	4
Lifting off the grass—5 days women, at 8d per day,	0	3	4
Man tying,	0	1	0
Taking to mill—1 horse and 2 men,	0	4	0
Making handfuls at mill—1 woman,	0	0	8
Mill—say 46½ stones, at 1s per stone average,	2	6	6
Taking to market—man and horse,	0	3	0
Tithe,	0	1	6
Poor Rate,	0	1	0
Two County Cesses,	0	4	0
	9	4	2
Drawing from mill,	0	3	0
Rent,	1	15	0
	£11	2	2

Average sale,	£18	3	6½
Expense,	11	2	2
Gain, per acre,	£7	1	4½

If they had far to draw to and from the water and mill, the expense would be greater; and in proportion, more or less, to the weight of the crop, distance of water, distance of spread-ground, distance of mill, and distance of market.

TO THE COMMITTEE OF THE ROYAL FLAX IMPROVEMENT SOCIETY.

Having, from an early period, taken a lively interest in the improvement of the culture and of the treatment of flax, and having had, personally, the opportunity of inspecting the processes in use in the flax-growing countries of the Continent, I have deemed it peculiarly my duty, as a member of the Committee of the Flax Improvement Society, to render such aid as might be in my power in testing the merits of the new mode of steeping proposed by the late Mr. Schenck.

It seems peculiarly desirable to remove from the character of this system all doubt and uncertainty, as it promises, if it be found to realize the advantages promised by its projectors, to place the management of the flax crop on that footing of uniformity and regularity to which the success of Belgian culture is so much to be attributed. It seems a necessary condition of the general application of this system, that it be conducted on an extensive scale, by capitalists who shall purchase the flax from the grower as is done by the flax dealers in Belgium; and, it may be hoped, from the success which has attended the early attempts at the introduction of the system in this country, that the steeping-vats of Mr. Schenck shall more than countervail the advantages derived by the Belgians from the famed waters of the River Lys.

It is scarcely necessary to advert to the obvious advantages which will result from the uniform action of extensive establishments for the treatment of flax. The supply of large quantities of flax, of similar colour and quality, to the spinner, would be of immense advantage, even were the quality no better than under the ordinary treatment; but, when the attainment of a decided superiority of quality and yield is superadded, accompanied by the inestimable value gained by preservation of the seed, hitherto almost entirely lost, the object assumes the character of national importance. It is also matter of pleasing contemplation, that the prospect of improvement opens upon us at the very moment in which the wants of the country, arising from the position of the cotton trade and the insufficient supply of its raw material, have been demanding the extended production of our Northern staple, which is already being applied to the manufacture of fabrics of much greater variety than were, till lately, thought of. If the farmer can only now be induced to do his part, by rivalling the Belgian flax grower in the draining, deepening, pulverizing. and cleaning of his soil, and in the application of liquid manure, for the purpose of stimulating the early growth of the tender plant, during the season in which a parching drought is often found to check it, to a degree not afterwards to be remedied, or by calling in the aid of the chemist, to supply him with such artificial compounds as the discoveries of science may enable him to prescribe, there seems no reason, though our climate may not, in all respects, be equally suited with that of Flanders for the production of the finest flax, why the soil of Ireland should not be made to supply the raw material in any quantity which the rapid growth of our staple manufacture may require.

I rejoice, then, in being enabled to state to the Society that, though on some points I may at first have entertained doubts, the result of my experiments, as detailed in the accompanying table, have convinced me that great advantages may be realized from the use, subject to proper limitations, of the system under consideration.

My views have been directed to the discovery of the conditions under which productiveness, fineness of fibre, and durability, may be combined.

For the credit of the trade, I trust the manufacturer will never be induced to sacrifice the character of family linen for the attainment of a superficial and deceitful appearance of smoothness and beauty. I should lament to see the flaxen fibre tortured into a state in which it could be made to pass into thread by the action of cotton machinery, losing almost entirely the character of linen, and perhaps, ultimately, falling short in value of the substance for which it would seek to be a substitute. I shall still hope to find Irish linen supporting its essential characteristic of strength and durability; and this, I believe, need not be sacrificed, under the proposed mode of treatment, if the temperature be kept within moderate limits—a temperature not lower than 80 degrees, nor exceeding 90 degrees, of Fahrenheit (my experiments indicating that 80 is the preferable degree), will, I believe, be found to afford the largest produce, with unimpaired strength of fibre, and a degree of fineness at least equal to that produced by the more speedy but dangerous and weakening temperature of 98 degrees. At the temperature of 65 degrees the most marked inferiority, in every respect, was observable in my experiments. I am, therefore, enabled to recommend that the temperature be confined within the limits I have mentioned. My experiments have also established another point, for which I was not unprepared, that exposure to the sun, and drying upon the grass, vastly improve the fibre. The lengthened term of exposure on the grass, in use in Belgium, on the banks of the Lys, is regarded as indispensable in the production of the very fine flax of that country; and it was only to be expected that, to some extent, it would be found serviceable, though not absolutely necessary, even under the new system.

I am clearly, therefore, of opinion that, when the state of the weather shall permit, it will be found very conducive to the improvement of the quality to spread and turn the flax on the grass, after having been first a little dried by setting the bundles on end, to give firmness before spreading; and that, though drying in sheds may answer tolerably well, when no better can be done, during the Winter season, the spreading and turning on the grass will be found eminently serviceable during the Summer.

With these observations, I submit the annexed tabulated results of my experiments to the Society. They are, on the whole, very satisfactory to my own mind, as they have impressed me with the conviction that much has been already effected, and with the hope that very much more may be achieved, in the improvement of the material, and the consequent advancement of the branch of industry which is so vitally important to our struggling community.

WILLIAM G. ANDREWS.

Comber, December, 1850.

EXPERIMENTS,

By **William G. Andrews**, on the Steeping of the Flax Crop of 1849 (secondary in quality and fineness), in water heated by steam, as specified in the Table; the half of each parcel dried in a shed, on Mr. Schenck's system, and the other half spread on the grass, as practised in Flanders. Also, a similar quantity steeped in water taken from a river (without steam), at a temperature of 60 to 65 degrees, the half dried in a shed, and the other half spread on the grass. The table calculated at the rate of 100lbs. of dry green flax for each parcel, before steeping.

Comber, *28th November*, 1850.

When Steeped.	Quantity of Green Flax.	Temperature.	Time in Steep.	Spread on Grass.	Dried in Shed.	Beets dried on end to firm the fibre.	Time on Grass.	Time in Shed.	Loss of weight by steeping—Grassed.	Quantity of dried straw—Grassed.	Produce from dried straw—Grassed.		Loss of weight by steeping—dried shed.	Quantity of dried straw from shed.	Produce from dried straw in shed.		OBSERVATIONS.
											Flax.	Tow.			Flax.	Tow.	
	Lbs.	Deg.	Hours.	Lbs.	Lbs.	Hrs.	D. H.	D. H.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	
No. 1. Monday, 29th July...	100	98	53½	50	50	11	9 7	11 4	7 3	42 13	7 8	1 4	5 8	44 8	9 1	0 15	450 gallons of water used to each of these 100lbs. of flax in the steeping-vat. The temperature fell from 12 to 14 degrees by night, and 8 to 10 degrees by day; and each night and morning was heated to the proper degree.
No. 2. Monday, 29th July...	100	90	63	50	50	9	8 23	11 20	6 9	43 7	8 14½	1 4	9 1	40 15	9 1	0 15	
No. 3. Monday, 29th July...	100	80	86	50	50	10	8 0	9 20	10 0	40 0	9 1	0 15	7 8	42 8	7 10½	0 15	
No. 4. Monday, 29th July...	100	60 to 65 no stm.	D. H. 13 19	50	50	7	8 21	8 21	10 0	40 0	5 0	3 12	7 8	42 8	3 14½	2 10	This trial was a failure. Only 160 gallons of water used. The low temperature not successful. The same quality as this, steeped in a pool in the earth, on the old plan, did better.
WATER USED FOR STEEPING A SECOND TIME.																	
No. 5. Thursday, 1st Aug....	100	90	Hours. 75¾	50	50	15½	7 4	7 0	8 12	41 4	8 12	1 6½	7 8	42 8	8 4½	0 15	This trial was darker in colour, took longer time to water, and more difficult to judge, when properly steeped.
PROOF EXPERIMENT OF THE BEST AND WORST OF FORMER TRIALS WITH CROP OF 1850.																	
No. 6. Thursday, 19th Sept.	100	80	91¾	50	50	6	2 0	4 0	10 0	40 0	9 1	0 5	8 8	41 8	9 2½	0 5	The quality of green flax of these two parcels was better than 1849 crop, and confirms the result of No. 3. This trial much better than No. 4, owing to use of large quantity of water in steeping, and more regular temperature by heating with steam.
No. 7. Thursday, 19th Sept.	100	65	D. H. 7 15	50	50	8½	10 1	10 1	10 0	40 0	8 7	0 12½	10 0	40 0	6 11½	0 15	

Notes.—No. 3. Best trial; finer ends, nice colour, unbroken fibre, finer quality of tow, easier managed in steeping and cleaning. No. 2. Second in quality. No. 1. Third quality; softer fibre, more towy and less oil than No. 3, and will yield less yarn. No. 4. Failure—only trial without steam, and only trial with 160 gallons of water in the steeping-vat. No. 5. Steeped in the water previously used in experiment No. 2.—*(See observations.)* Shed-dried always inferior in quality to grassed. No. 6. This proof confirms the result of No. 3, though steeped at a more unfavourable season. No. 7. Much superior to No. 4; slightly injured by hail storm on grass.

EARLY SOWING.

The following results of the experience of a gentleman in County Derry, shew the advantage of sowing flax at as early a period of the season as the weather will permit:—

Believing that every information respecting flax culture is valuable to a Society such as yours, I am induced to submit to you the result of an experiment in early sowing, this year. I am led to state it now, instead of waiting till the crop is marketable, because I am enabled to forward a sample of the present state of the crop, and thus apply the test of fact to a theory which is much questioned, and which the peasantry, especially, are greatly disinclined to adopt.

On a small scale, I have been, for many years, a cultivator of flax (when I say on a small scale, I mean from one to perhaps five acres per annum.) I have inclined always to early sowing, from an observation of my own, that the flax, for the most part, blooms in the month of June, no matter when sown, and grows comparatively very little afterwards. This year, however, I was led to make the experiment much earlier than what I had hitherto considered early, induced by the very dry weather of the month of March, and anticipating (on, indeed, no better authority than the weather-table in Thom's Almanac) that April would be a particularly wet month, and likely to interfere with all labour, but especially that connected with flax. I, therefore, sowed somewhat more than half an Irish acre on the 18th March, a sample of which I send herewith. It is not by any means a selected stalk; it has been pulled at a venture, and measures twenty-nine inches. The other stalk is from a second half-acre, sowed the 20th April, which, by many, is considered rather early than otherwise; it measures twenty-one inches. Both sowings were on stubble—the earlier, wheat stubble after potatoes on old lea; the latter, oat stubble on lea, without any previous manure crop. It will be recollected that we had severe frost and deep snow, this year, after the 18th March, so that here is indisputable proof that flaxseed is not injured by frost. Whether frost coming later upon the forward young plant would do it injury may, perhaps, be questionable, but I can testify that mine was well budded, in fact all but abraird, when it sustained the storm unscathed. I laid it down with cloverseed, which also escaped without injury. The crop is now a very beautiful object, even in growth and healthy in colour. The seed was Dutch, and sown rather heavy, about 17 pecks to rather more than one Irish acre. I shall have pleasure in communicating the final result, when the crop reaches the market.

Absence from home has prevented my sooner replying to your inquiries respecting the results of my flax crop. Before proceeding to detail them, I may observe, that in this district, and (I am inclined to think that the remark will be found to apply generally), the crop of flax has by no means fulfilled the expectations which were formed in the earlier part of the season. It has been found to yield poorly at the mill, and to require very severe scutching to produce a fine fibre—of course diminishing very sensibly the produce, if a high-priced sample was desired. In my own case, I attribute this result to a heavy rain, of some days' continuance, at a critical period in the middle of July, just when my earliest flax had hard-bolled. It was at that time within a trifle of the prodigious length of five feet—fully four feet eight or nine inches on the average. Prostrated by the rain, its own luxuriance precluded all chance of its rising again. The chicken-weed conquered it, and so it not only failed to *gather meat,* as the country people term it, but very soon what was undermost began to taint; and the mischief proceeded so rapidly that I was forced to pull it on the 24th July (considerably sooner than I could have wished), in broken weather, when I could not venture to ripple it. This flax, as might be anticipated, proved very soft at the mill. To clean it as effectually as I could have wished would have reduced it sadly in bulk. I was contented, therefore, with a rather less finished article, and obtained, from my 8½ pecks, 30 stones, which fetched 8s per stone in Cookstown market. The second sowing was circumstanced very similarly to the first. It, too, had failed to gather meat when it lay down, and the fermenting process also began to tell upon it. However, I did not pull it till the 7th August, and took advantage of a few comparatively fair days to ripple it. This flax had not acquired anything like the length and bulk of the other. At the mill I obtained, from just the same quantity of seed, but 23½ stones, which, at market, produced only 7s 9d per stone;—not that the quality was materially different, but sales had become a little languid. From this you perceive that, although from unforeseen causes, neither result was as favourable as might have been expected, the advantage was decidedly in favour of the early sowing. The same misfortunes befel it under more advantageous circumstances—it had acquired greater length, and, by the great bulk of straw, compensated in some degree for the defective yield. I should mention, that I kept a faithful account of every farthing expended, and the final result is *a clear profit* of 14*l.* on the one acre sown. It is plain that, under more prosperous circumstances of weather, &c., this might have been considerably greater; but still, I know of no other sort of crop which, this year, would have paid nearly so well.

I need scarcely say, that, under the conditions I have described, it was impossible to save the rippled bolls for seed; I have, however, a great bulk of most valuable feeding from them. And, in conclusion, I will mention what seems to me a very curious circumstance respecting them. In the corner of the field where the rippling-combs had been placed, there remained a small heap of seemingly crushed and rotten green bolls—perhaps the bulk of half-a-peck. I had as many of them raked together and brought home as seemed worth the trouble; and, in the course of a week or ten days, walking over the ground, I was much surprised at seeing the worthless residue germinating. I desired that they should not be disturbed, and there they have stood and grown ever since. I send you herewith two or three stalks, pulled this day, in intense, hard frost, and after several very frosty nights. Does not this seem to prove that the flax plant, even in an advanced and succulent state, is capable of resisting the action of frost, as my experiment proved the same fact as to the braird?

Query, too, does it not tend to shew that we lay too much stress upon very choice seed, or, at least, that home-grown seed can be saved under very much more unfavourable circumstances, both as to maturity and weather, than is generally imagined? I now regret very much that I did not make the attempt to save my bolls for seed.

ABSTRACT OF CONSTABULARY RETURNS OF THE BREADTH OF FLAX SOWN IN IRELAND, IN 1849.

COMPILED FOR THE GOVERNMENT, BY CAPTAIN LARCOM, R.E.

	Statute Acres.	
Province of Ulster.		
Antrim,	4,064	
Armagh,	5,181	
Cavan,	2,182	
Donegall,	12,662	
Down,	4,807	
Fermanagh,	1,015	
Londonderry,	11,438	
Monaghan,	6,775	
Tyrone,	9,527	
Total in Ulster,		57,651
Province of Leinster.		
Carlow,	22	
Dublin,	16	
Kildare,	21	
Kilkenny,	16	
King's County,	57	
Longford,	91	
Louth,	125	
Meath,	172	
Queen's County,	18	
Westmeath,	81	
Wexford,	115	
Wicklow,	7	
Total in Leinster,		741
Province of Munster.		
Cork,	458	
Clare,	179	
Kerry,	136	
Limerick,	94	
Tipperary,	59	
Waterford,	11	
Total in Munster,		937
Province of Connaught.		
Galway,	54	
Leitrim,	154	
Roscommon,	35	
Mayo,	524	
Sligo,	218	
Total in Connaught,		985
Total in Ireland,		60,314

EXTRACT FROM THE REPORT OF CAPTAIN LARCOM, PREFIXED TO THE AGRICULTURAL STATISTICS.

FLAX.—The extent of flax cultivation, in 1849, exceeded that of 1848 by 6,451 acres, on the aggregate of the whole country; although, in the Provinces of Leinster, Connaught, and Munster, the returns shew a considerable diminution,—this diminution having been more than compensated by the increase in Ulster alone, which amounted to 8,102 acres. The County of Donegall produced, in 1849, the greatest quantity of flax; but, in the County of Londonderry, its extent bore a larger proportion to that devoted to other crops, than in any other county in Ireland, the proportion being one acre of flax to every fourteen acres of arable land. In Donegall, it was one to eighteen; in Monaghan, one to twenty-one; in Tyrone, one to twenty-seven; in Armagh, one to thirty-three; in Antrim, one to fifty-six; in Down, one to sixty four; in Cavan, one to seventy-eight; and in Fermanagh, one to one hundred and four. The following table shews the extent of flax cultivated in each Province, during the years 1847, 1848, and 1849:—

	ULSTER. Acres.	MUNSTER. Acres.	CONNAUGHT. Acres.	TOTAL. Acres.
1847	53,701	1,156	1,811	58,812
1848	49,549	1,249	1,826	53,863
1849	57,651	937	985	60,314

NOTE.—In analysing these returns, it is interesting to observe to what extent the exertions of the Society, and the establishment of scutch mills and steeping concerns have influenced the culture of flax in particular localities of the new districts, as contrasted with larger areas. Thus, while in County Mayo, flax only occupies 1 acre in every 2,602, in the Ballina Union it occupies 1 in 1,276; in County Cork the proportion of flax is 1 in 4,031, while in the Skibbereen Union it is 1 in 939; and, in the Dunmanway Union, 1 in 873. In Tipperary County it is 1 in 19,215, and in the Union of Tipperary 1 in 6,333; in Wexford County it is 1 in 5,014, and in Gorey Union 1 in 3,700; in Queen's County 1 in 23,600, and in Abbeyleix Union 1 in 10,360.

EXTRACT

FROM

A PAPER READ BY G. R. PORTER, ESQ., F.R.S.,

SECRETARY OF THE BOARD OF TRADE,

To the British Association for the Advancement of Science, at its Edinburgh meeting, August, 1850, entitled, "Remarks suggested by an Examination of the recent Statistics of the Cotton Trade in Great Britain."

To those who reflect seriously, it must appear a matter of grave importance how any continued failure of cotton crops is to be met, and not only so, but also how a substitute is to be found for the hitherto constantly increasing amount of those crops; for it will not be enough to provide the same amount of employment as before for our continually growing numbers in a branch of industry, which, by its ordinary operations, necessarily brings forward those increased numbers. The uneasiness which it is natural to feel, under the circumstances here described, has led to the inquiry, as diligently and as carefully as opportunity has allowed, whether some substitute or auxiliary may not be called into action, which shall meet the evil that threatens us, and this, it is suggested, may be found in a kindred branch of manufacture—that of flax.

A very few years ago, when first anxiety began to arise concerning the prospects of our cotton manufacture, the resource which has just been named did not present itself. At that time, our linen manufacture had not made the progress by which it is at present marked—a progress proportionally equal to any that has been made at any time in the cotton manufacture.

If we compare the prices of linen in 1832, when the home market was secured to the manufacturer by import duties equal to 40 per cent. on the value, and in which year the bounties which had long been granted on the exportation of British linens finally ceased, with the prices in 1849, we find the following remarkable result:—

	1832.			1849.		
	s.	*d.*		*s.*	*d.*	
The same quality sold for	1	4	....	0	8¼	per yard.
" "	1	6	....	0	9¼	"
" "	1	8	....	0	10¼	"
" "	1	10	....	0	11¼	"
" "	2	0	....	1	0½	"
" "	2	2	....	1	2	"
" "	2	5	....	1	3½	"

shewing a reduction of cost amounting to nearly fifty per cent.

The making of cambric handkerchiefs in Ireland is quite a modern branch of industry. The following list exhibits the comparative prices, per dozen, in 1833, 1838, and 1848, of handkerchiefs of the same qualities:—

1833.		1838.		1848.	
s.	*d.*	*s.*	*d.*	*s.*	*d.*
8	3	7	0	2	10
9	3	7	9	3	2
10	3	8	3	3	6
11	6	9	0	4	0
12	9	10	0	4	6
14	3	11	6	5	2
16	3	14	0	6	0
18	9	15	6	7	3
21	3	17	0	8	9
24	0	19	0	10	6
27	6	22	6	12	6
31	0	25	0	15	0
35	0	28	0	18	0

shewing a reduction in the cost, during 15 years, of about 60 per cent., and, in the last 10 years, of 47 per cent., on the average of all qualities.

During the five years between 1844 and 1849, the reduction in the cost of 5-8 cambric handkerchiefs has been as follows:—

1844.		1849.	
s.	*d.*	*s.*	*d.*
14	6	11	0
16	0	12	0
17	6	13	0
19	0	14	3
20	6	15	6
22	0	16	9
23	6	18	0
25	0	19	6
27	0	21	0
29	0	22	6
31	0	24	0
33	0	25	6
35	0	27	6
38	0	29	6
41	0	32	0

This economy has been mainly effected in the spinning processes. A bundle (60,000 yards) of No. 40's line-yarn, the cost of which, in 1839, was 11s, was reduced, in 1848, to 4s 3d, or from 2s 2d to 10d per lb.—more than 60 per cent. During the same period, the fall in the price of cotton yarn, of about the same quality, has not quite amounted to 20 per cent. Since 1848, a rise in the price of flax has occasioned a corresponding advance in the price of yarn, and that which could then be bought for 10d per lb., is now quoted at 12½d.

Hitherto, we have in this kingdom been greatly dependent upon our foreign importations for supplies of flax, and, while the law imposed restrictions upon the importation of grain for human food, there existed a kind of moral impediment in the way of increasing our home growth of articles for any purpose not of equal primary necessity. That impediment is now removed, and there can be no reason given why our fields should not be henceforth used for the production of any article that promises an adequate profit to the farmer. It is especially desirable so to apply the productive power of the soil for the supply of articles as indispensable to the support of millions of our people as corn itself; and an additional inducement to the growth of flax, beyond that offered by other articles, may be found in the fact, that to bring it to the same condition as that in which it is usually imported from foreign countries, calls for the employment of a considerable amount of human labour. There is no part of the United Kingdom in which the flax plant cannot be successfully cultivated, and there is hardly any country whence it might not be brought to supply our deficiencies, should such arise. It grows and flourishes equally in the climate of Russia and in that of India. In Ireland a sustained effort has been made by "The Royal Society for the Promotion and Improvement of the Growth of Flax," to induce proprietors in that country to devote a portion of their land to its cultivation; and it is understood that, in the present year, a larger breadth has been sown with flaxseed in Ireland than in any former year. Great improvements in the processes employed for dressing the fibre are also now in course of adoption, and it is perhaps not taking too sanguine a view of the result of these efforts to believe that the reduction in the cost of the material, and in the expenses of the processes needful for its manufacture, will, for some time, go forward in at least as satisfactory a degree as we have seen to have been already realized.

We cannot determine the growth of the linen manufacture by the same test which satisfactorily shews that of the cotton manufacture—viz., the quantity of raw material imported—since a part of the flax—in what proportion there are no means of shewing—is produced from our own soil; but it will be evident, from the following figures, that a very rapid extension has been effected.

The quantity of foreign flax imported for use in the United Kingdom, in each year, from 1831 to 1849, has been as follows:—

	Cwts.		Cwts.		Cwts.
1831 ...	936,411	1838 ...	1,626,276	1844 ...	1,583,494
1832 ...	982,516	1839 ...	1,223,701	1845 ...	1,418,323
1833 ...	1,129,632	1840 ...	1,253,240	1846 ...	1,147,092
1834 ...	811,722	1841 ...	1,346,843	1847 ...	1,052,089
1835 ...	740,814	1842 ...	1,145,759	1848 ...	1,463,661
1836 ...	1,529,116	1843 ...	1,437,150	1849 ...	1,806,786
1837 ...	1,000,865				

It should not, in any degree, interfere with the prosperity of the present race of cotton manufacturers, if flax were to be substituted in part for the material now employed by them. Changes are, doubtless, necessary, in order to adopt a part of their present machinery for the spinning of flax, but the expense to which the proprietors might thus be subjected, would be well compensated, during the first year of short supply of cotton that might arise, by the security that they would feel in the future regularity of their operations, assured, as they then would be, against the irregularity of seasons, or those disturbances which have arisen, and which always may arise, to disarrange their operations, and to interfere with the regular employment of their hands. It would not appear difficult so to order the arrangements of a spinning-mill or a weaving-shed, that both flax and cotton might be included within its operations, and that the preponderance in those operations might be given, from time to time, either to the one or to the other, according to the capabilities of the markets of supply on the one hand, and the requirements of the markets of consumption on the other.

Goods are now woven in which both materials are employed. This description of cloth was produced in the looms of Flanders more than 400 years ago. Two centuries later, such mixed goods were made in this country, the cotton employed in the same being imported from Cyprus and Smyrna; it was not, indeed, till 1772, only seventy-eight years ago, that goods were made in England, the whole material of which was cotton. The progressive reduction in price of this material, so much greater than that which, until a comparatively recent period, has attended manufactures of flax, has hitherto caused the wonderful extension that we have witnessed in our cotton trade, an extension which has added most materially to the comfort of the labouring classes of this and other countries. So long as we could look with any degree of security to the continuance of this state of things, there could be no good reason for suggesting any change in our manufacturing arrangements; but now that a check seems to be given to the progress of the cotton trade, through uncertainty in the amount of supply obtainable, whether by reason of untoward seasons, or through the employment of constantly greater quantities of the material in the principal country of production, the old state of things is so far changed as to render it a matter of national importance to provide the means for meeting the difficulties thus presented, and it may be considered a very happy circumstance that those means are not far to seek, but that, through the adoption of some previous changes in the most strictly analogous branch of industry, the adoption of a remedy is rendered comparatively easy.

It must be satisfactory to us, in a high degree, to know that the reductions mentioned in the cost of our linen manufactures have not been accompanied with any distress on the part of the spinners and weavers, nor of loss among the manufacturers; but, on the contrary, that, during the period in question, the linen trade has been extended to a degree unexampled in its previous history, affording greater and more profitable employment to every one engaged in it. An accurate judgment may be formed, concerning the progress of the trade by ascertaining the extent, at different periods of our exports. In 1832 we sent to our colonies, and to foreign countries, 49,531,057 yards of linen, valued at £1,716,084. In 1838, our exports reached 77,195,894 yards, valued at £2,717,979. In 1844, we exported 91,283,754 yards, valued at £2,801,609. And in 1849, the exports reached 106,889,558 yards, while the declared value amounted to £3,073,903. During the same period, our shipments to foreign countries of linen yarn have advanced in value from £8,705 in 1832, to £737,650 in 1849.

It must not for a moment be imagined that this subject is brought forward with any desire of fostering or encouraging one branch of manufacture at the expense of any other. The object in view is, in fact, the very opposite to such a desire, and springs from the wish to preserve, in its condition of prosperity and progress, one of the chief sources of employment for our continually growing numbers, without in any way interfering with any other branch of industry. It is hoped that the means here indicated may be found efficacious for meeting the difficulties that now threaten to obstruct the course of the cotton manufacture, without interfering with, or creating difficulties for the linen manufacture, by transferring, in part, the labour now bestowed upon one material to the conversion of the other. This could not be accomplished if the production of flax were, like that of cotton, in any great degree dependent upon the accidents of the seasons in one particular country, a disadvantage from which the cultivation of flax has always been free, while, of late, the obstacle which, morally, at least, stood in the way of its extensive production in the United Kingdom, has been made to disappear from our statute-book. The adoption of flax, as an auxiliary, by our cotton manufacturers, could not work any injury to the linen trade, since it would only make good the deficiency, if, and as it should arise in the production of cotton fabrics.

ANNUAL BALANCE SHEET

OF THE ROYAL SOCIETY FOR THE PROMOTION AND IMPROVEMENT OF THE GROWTH OF FLAX IN IRELAND.

Dr.

1849.				
Oct. 31.—	To balance on hands,	£162	5	0
1850.				
Oct. 31.—	" Subscriptions,	451	14	5
..	" Grant from Government, through the Lord Lieutenant,	1,000	0	0
..	" Repayments on account of Machinery,	37	0	0
		£1,650	19	5

Cr.

1850.							
Oct. 31.—	By Office-Rent, Taxes, Fuel, Attendance, &c.,				£54	2	10
..	" Printing and Advertising,				58	10	2
..	" Postage and Carriage of Parcels,				22	8	4
..	" Stationery,				14	4	3
..	" Implements,				4	12	6
..	" Sundries, not included in the foregoing items,				10	18	1
..	" Secretary's Salary,				200	0	0
..	" Agriculturists' Salaries, in full or in part, viz.:—						
	Henry Haslett,	£73	10	6			
	Hugh Orr,	58	15	0			
	R. F. Patterson,	55	1	4			
	William Smith,	54	2	6			
	W. J. O'Hara,	65	19	6			
	W. J. M'Kinney,	37	10	0			
	John Stewart,	36	14	4			
	Samuel Kennedy,	35	5	0			
	Hugh M'Dowell,	26	11	0			
	Isaac Irwin,	24	10	0			
	Matthew Fisher,	11	0	0			
	Hugh Nelson,	3	0	0			
	Matthew Harris,	3	0	0			
	James M'Aree,	31	5	0			
					£516	4	2
	Carry forward,				£881	0	4

Brought forward, ...		£881 0 4
Oct. 31.—By Travelling Expenses, viz.:—		
Secretary, ...	£30 5 7	
Agriculturists, ...	374 8 9	404 14 4
,, " Balance in Belfast Bank, ...	£316 3 9	
,, " " in Secretary's hands, ...	49 1 2	
		£365 4 11
		£1,650 19 7

JOHN CHARTERS,
JAMES CAMPBELL, } AUDITORS.
JAMES MACADAM, JUN, SECRETARY.

SUPPLEMENT,

SHEWING THE RECEIPTS AND DISBURSEMENTS OF THE SOCIETY, FROM ITS FORMATION, 1ST MARCH, 1841, TO 31ST OCTOBER, 1850.

RECEIPTS.

Subscriptions and Donations, ...	£7,535 11 3
Government Grants, ...	3,000 0 0
Accidental Receipts, ...	22 16 6
Repayments for Machinery, ...	249 6 2
	£10,807 13 11

DISBURSEMENTS.

Agriculturists' Salaries and Travelling Expenses, ...	7,084 13 4
Secretary's Salary, ...	1,275 0 0
Prizes awarded, ...	482 11 0
Machinery and Implements, ...	404 2 8
Printing and Advertising, ...	500 6 7
Office-Rent, Fuel, Taxes, ...	253 7 4
Postage and Carriage, ...	139 4 5
Stationery, ...	67 5 7
Sundries, not included in the foregoing items, ...	235 19 8
Balance in hands, 31st October, ...	365 4 11
	£10,807 15 6

JOHN CHARTERS,
JAMES CAMPBELL, } AUDITORS.
JAMES MACADAM, JUN., SECRETARY.

CONTRIBUTIONS TO THE SOCIETY'S FUNDS.

	1841 to 1849.			1850.		
HIS ROYAL HIGHNESS PRINCE ALBERT,	£25	0	0			
Abercorn, the Marquis of,	50	0	0			
Aberdein, Gordon, & Co., Montrose,	10	0	0			
Adair, Alex. Shafto, M.P., London,	30	0	0	£5	0	0
Adair & Gunning, Cookstown,	30	17	0			
Agnew, James, Cairncastle-Lodge, Larne,	25	0	6			
Ainsworth, H., Cleator, Whitehaven,	10	0	0			
Alexander, John, Millford, Carlow,	2	2	0			
Alexander, John, Newtownlimavady,	5	0	0			
Alexander, Nathaniel, M.P., Portglenone,	31	6	0			
Alexander, Henry,	1	1	0			
Algeo, Captain, Armagh,	5	5	0			
Andrews, James, & Sons, Comber,	19	8	0	1	1	0
Andrews, Michael, Ardoyne,	4	4	0	1	1	0
Anderson, H., Ballinacree, Co. Antrim,	1	1	0			
Arbuckle, Lieut.-Col., Donaghadee,	1	1	0			
Annesley, Viscount, Castlewellan,	4	4	0			
Armstrong, W. Jones, Kippure Park, Blessington,	7	7	0			
Atkinson, Henry, Moy,	1	1	0			
Atkinson, W. S., Portadown,	1	1	0			
Aytoun, James, Kirkcaldy,	2	0	0			
Bacon, Edward, Thorock-Hall, Lincoln,	10	10	0			
Baker, Thomas, & Son, London,	1	1	0			
Balfour, Alexander, Kirkcaldy,	1	1	0			
Bandon Branch, County Cork,	10	0	0			
Bankhead, J. B., Dublin,	8	8	0			
Bantry Branch, County Cork,	10	0	0			
Barbour, William, Lisburn,	1	1	0			
Bangor, Viscount,	2	0	0	2	0	0
Barcroft, J. & N., Stramore,	2	0	0			
Barklie, A. & G., Ballymoney,	10	0	0			
Barter, Dr., Blarney, County Cork,	2	0	0			
Barton, Ffolliott W., Clonally, Kish,	2	0	0			
Bates, John, Belfast,	8	0	0	2	2	0
Bateson, Sir Robert, Bart., Belvoir Park,	32	2	0	2	2	0
Bath, Marquis of,	5	0	0			
Batt, Thomas, Pardysburn, Belfast,	5	0	0			
Beattie, John, Portadown,	1	1	0			
Bell, John, & Co., Whitehaven,	1	0	0			

	1841 to 1849.			1850.		
Bell, J. & W. L., & Co., Ballyclare,	£1	1	0			
Bells & Calvert, Whitehouse,	45	17	0	£2	2	0
Bell, Thomas, & Co., Lurgan,	5	5	0			
Bennett, William Ross, Herefordshire,	5	0	0			
Bennett, Thomas, & Co., Aghadoey, Co. Derry,	2	2	0			
Benyon & Co., Leeds,	10	0	0			
Beresford, John Barré, Newtownlimavady,	5	0	0			
Bernard & Koch, Cregagh, County Down,	6	0	0	2	2	0
Berry, Joseph, Moira,	1	1	0			
Besnard, Julius, Cork,	1	1	0			
Bessborough, Earl of,	10	0	0			
Bicknell, George, Manor-House, Kilrea,	4	4	0	1	1	0
Bigger, Lennox, Dundalk,	1	1	0			
Birch, James, Ballybeen, County Derry,	10	0	0			
Birley, J., & Sons, Kirkham, Lancashire,	155	0	0			
Birney, John, Lisburn,	2	2	0	1	1	0
Bishop Sterne's Charities,	3	0	0			
Black, Henderson, Woodford, County Down,	3	0	0			
Black, Henry, Belfast,	1	1	0			
Blackwood, James, Saintfield,	4	4	0	2	2	0
Blakely, Rev. F., Moneyrea,	9	9	0	1	1	0
Bland, Rev. R., Whitehouse,	1	1	0			
Blundell, Francis, Navan,	18	15	0			
Boomer, James, & Co., Belfast,	73	15	0	5	0	0
Borthwick, John, Killroot,	9	9	0	1	1	0
Bouch, Joseph, London,	1	1	0			
Boyd, John, & Co., Belfast,	75	15	8			
Boyd, J. E., Letterkenny,	2	2	0			
Boyle, Gill, & Co, Leeds,	2	0	0			
Booth, Sir R. Gore, Bart., Lisadill, Sligo,				1	1	0
Brady, Captain, Oaklands, Cookstown,	5	0	0			
Brooke, B. G., Moyaver, County Antrim,	1	1	0			
Brooke, Sir A. B., Bart., M.P., Brooksboro',				5	0	0
Brooks, John, Bolton,	10	0	0			
Brown, John, & Sons, Donacloney,	4	4	0	1	1	0
Brown, J. & W., Dundee,	5	0	0			
Brown, Robert, Belfast,	5	0	0			
Browne, R. Clayton, Carlow,	1	1	0			
Brush, C. M., Dromore,	1	1	0			
Bryan, Colonel, Jenkinstown, Kilkenny,	1	1	0			
Buckley, Henry, Hillsborough, Roscrea,	1	1	0			
Buist, A. J., Dundee,	10	6	0			
Burgess, J. Y., Parkanour, Dungannon,	1	1	0			
Butler, Thomas, Kilkenny,	2	2	0			
Byres, James, Mountnorris, Omagh,	1	1	0			
"B.," Birmingham,	1	1	0			

	1841 to 1849.			1850.		
Caledon, Earl of,	£31	10	0	£5	5	0
Camm, Samuel, & Co., Manchester,	2	0	0			
Campbell, Henry, Belfast,	10	0	0			
Carlow Branch,				10	0	0
Carty, Cairnes, Rogers, & Co., Drogheda,	5	0	0			
Cassidy, Robert, Magherafelt,	2	2	0			
Cather, D., Newtownlimavady,	1	1	0			
Caulfeild, Hon. Henry, Hockley, Armagh,	8	8	0	1	1	0
Castlebridge Farming Society, County Wexford,	10	0	0			
Charlemont, Earl of,	40	0	0			
Charley, John, Finaghy, Dunmurry,	20	0	0			
Charley, J. & W., & Co., Seymour-hill,	4	4	0	2	2	0
Clancarty, Earl of,	5	5	0	1	1	0
Clarendon, Earl of,	10	0	0			
Clarke & Innes, Drogheda,	5	0	0			
Clarke, Richard, Bailieborough,	1	1	0			
Clonbrock, Lord,	10	0	0			
Clonakilty Branch, County Cork,	10	0	0			
Coddington, H., Oldbridge, Meath,	1	0	0			
Close, Lt.-Col., Drumbanagher, Newry,	15	0	0			
Clothworkers' Company, London,	30	0	0			
Coates & Young, Belfast,	22	0	0	2	2	0
Cogry Spinning Mills, Doagh,	5	0	0			
Collum, John, Enniskillen,				1	1	0
Cole, Hon. John, Florence-Court,				1	0	0
Cook, William, London,	20	0	0			
Cooper, Edward, Markree Castle, Sligo,				1	1	0
Cootehill Branch,	15	0	0			
Cope, A. W., Drumilly, Loughgall,	5	0	0			
Coulson, James, Lisburn,	1	1	0	1	1	0
Coulson, Brothers, Lisburn,	10	0	0			
Courtown, Earl of,	15	0	0	5	0	0
Cowan, William, & Co., Whiteabbey,	25	0	0			
Craig, A. W., Belfast,	10	0	0			
Cramsie, John, Belfast,	5	5	0			
Crawford, W. Sharman, M.P., Crawfordsburn,	26	6	0	2	2	0
Crawford, John S., Crawfordsburn,	3	3	0	1	1	0
Crawford & Lindsays, Banbridge,	4	4	0			
Cremorne, Lord,	20	0	0			
Crosbie, W. Talbot, Ardfert Abbey, Tralee,	1	0	0			
Curell, J. & D., Belfast,	25	0	0			
Curtis, Patrick, Dublin,	2	2	0			
Dargan, William, Dublin,				10	0	0
Darley, Rev. J., Dungannon,	1	1	0			
Davison, A. & J., Broughshane,				2	2	0
Dawson, Rev. I. M., Tipperary,	4	4	0			

	1841 to 1849.			1850.		
De Ros, Lord, Strangford,				£3	3	0
De Ros, Lady, Do.,				2	0	0
Derry, the Lord Bishop of,	£10	0	0			
De Salis, the Count, Tandragee,	5	0	0			
Despard, Mrs., Queen's County,				1	0	0
De Vere, Sir Vere, Bart., Currah-chase, Adare,	2	0	0			
De Vesci, Viscount,	20	0	0	10	0	0
Devonshire, Duke of,	5	0	0			
Dewhurst, John, & Co., Preston,	2	2	0			
Dobbin, Leonard, Armagh,	1	1	0			
Donegall, Marquis of,	5	0	0			
Douglas, Charles, Gracehill, Lurgan,	5	0	0			
Down, the Lord Bishop of,	3	3	0	3	3	0
Doyne, Charles J. Wells, County Wicklow,				1	1	0
Downshire, late Marquis of,	55	0	0			
Downshire, present Marquis,	270	0	0	25	0	0
Drogheda Branch,	25	0	0			
Dromore, the Dean of, Waringstown,	24	4	0			
Druitt, Thomas, Donacloney,	1	1	0			
Duff, Admiral, Elgin,	2	2	0			
Duffin, Charles, & Co., Belfast,	4	4	0			
Dufferin, Dowager Lady, Clifton,	15	0	0			
Dufferin & Claneboye,	5	0	0			
Dunbar, M'Master, & Co., Gilford,	152	18	0	10	0	0
Dungannon, Viscount,				5	0	0
Dunmanway Branch, County Cork,				10	0	0
Durham, Andrew, Belvidere, County Antrim,	2	2	0			
East Mill Company, Brechin,	2	0	0			
Edward, A. & D., & Co., Dundee,	5	0	0			
Enniskillen, Earl of,				4	0	0
Erne, Earl of,	35	0	0	5	0	0
Evans, T. K., Armagh,	1	0	0			
Ewart, William, & Sons, Belfast,	20	0	0	5	0	0
Falls Mill Company, Belfast,	140	0	0	5	0	0
Farmer, Sir G. R., Bart., Bideford,	1	1	0			
Ferguson, Sir R. A., Bart., M.P.,	10	0	0			
Ferguson, J. S., & Co., Belfast,	25	0	0			
Ferguson, John F., Belfast,	5	5	0			
Ferguson, T., & Sons, Whiterock,	1	1	0	1	1	0
Fethard Branch,				10	0	0
Filgate, Fitzherbert, Hillsboro',	1	1	0	1	1	0
Filgate, William, Lisrenny, Ardee,	1	1	0			
Fisher, John, & Co., Belfast,	14	7	0			
Fishmongers' Company, London,	30	15	0	5	0	0
Fitzpatrick, Rt. Hon. J. W., M.P., Lisdaff,				10	0	0
Fitzpatrick, R. W., Granston-Manor,				10	0	0

	1841 to 1849.			1850.		
Fletcher, A., & Co., Glasgow,	£68	15	0			
Foott, H. B., Carrigacunna Castle, Cork,				£1	1	0
Forsythe & Orr, Belfast,	49	12	0	2	2	0
Fortescue, Thomas, Ravensdale,	10	0	0	5	0	0
Foster, R. Springfield, Dungannon,	2	2	0			
Gaily, Daniel, Coleraine,	1	1	0			
Galmoy Farming Society, County Kilkenny,	10	0	0			
Gamble, T. & W., Carrickfergus,	10	0	0			
Gartlan, T. M'Evoy, Carrickmacross,	2	2	0			
Gascoyne, Misses, Kilfinane, County Limerick,	10	0	0	2	2	0
German, Petty, & Co., Preston,	130	0	0			
Gervais, Rev. Francis, Cecil, Augher,	10	0	0			
Gibson, James, Belfast,				1	1	0
Gihon, W., & Son, Ballymena,	4	4	0	1	1	0
Given, A., Newtownlimavady,	24	0	0			
Glasgow & Wood, Cookstown,	1	1	0			
Glendinning, Henry, Portadown,	1	1	0			
Gladstone, Thomas, London,	5	0	0			
Goddard, James, Belfast,	5	0	0			
Gosford, Earl of,	20	0	0			
Gore, Col. A. K., Beleek-Manor, Ballina,	1	1	0	1	1	0
Græme, Major, Crieff, Perthshire,				1	0	0
Gradwell, Chadwick, & Co., Drogheda,	37	10	0	20	0	0
Gray, William, & Sons, Whitehouse,	10	0	0			
Grandison, Thomas, Orisaba, Mexico,				1	0	0
Greg, Thomas, Ballymenoch,				1	0	0
Green, James, & Co., Keady,	19	8	4			
Greer, George, Lurgan,	10	10	0	1	1	0
Greville, Algernon,	1	1	0			
Grimshaw, Edmund, Mossley,	60	0	0	5	0	0
Grimshaw, James, & Sons, Whitehouse,	76	10	0	5	0	0
Gunning & Quarrell, London,	2	0	0			
Gunning & Campbell, Belfast,				1	1	0
Hall, Roger, Narrowwater-Castle, Newry,	22	2	0	2	2	0
Hancock, John, Lurgan,	8	8	0	1	1	0
Hancock, Professor, Belfast,				1	1	0
Harden, James, Harrybrook, County Armagh,	1	1	0			
Harrison, John, Mertoun, Belfast,	1	1	0			
Hawkshaw, Lt.-Col., Blaris-Lodge, Lisburn,	2	2	0			
Harris, J. P., Ashfort, Tynan,	1	1	0			
Hay, Brothers, & Co., Ballina,				1	1	0
Hayes, F. W., Seapatrick, Banbridge,	2	10	0			
Hayes, Richard, Millmount, Banbridge,	2	2	0			
Hemphill, Hunter, & Co., Greenfield, Coleraine,	10	10	0	2	2	0
Hendry, J. & W., Kirkcaldy,	1	0	0			
Henning, John, Waringstown,	11	6	0	2	2	0

	1841 to 1849.			1850.		
Henry, George, Tassagh, Keady,	£2	0	0			
Heron, Hugh, Banbridge,	1	0	0			
Herdmans & Co., Strabane,	5	0	0			
Herdman, J. & J., & Co., Belfast,	90	0	0	£5	0	0
Hertford, late Marquis of,	100	0	0			
Hertford, present Marquis of,	125	0	0	25	0	0
Heuzé, M., Landerneau, France,	1	0	0			
Hewett, Hon. and Rev., J. P.,	1	0	0			
Heyn, Gustavus, Belfast,	3	3	0			
Higginson, Henry, Leeds,	2	2	0			
Hill, Lord George A., Gweedore,	5	0	0			
Hill, Lord A. Edwin, M.P.,				5	0	0
Hillsborough, Earl of,	5	0	0			
Hincksman, Furness, & Co., Preston,	70	0	0			
Hives & Atkinson, Leeds,	30	0	0	20	0	0
Hodges, Professor, Belfast,	1	1	0	1	0	0
Houston, R. B. Blackiston, Orangefield,	14	4	0	2	2	0
Hudson, William, Mount-Caulfield, Newry,	1	0	0	2	2	0
Hull, Wilson, & Co., Belfast,	37	19	0	2	2	0
Hunter & M'Kissack, Belfast,	2	2	0			
Hunter & Moat, Dunmurry,	2	2	0	2	2	0
Hutchinson, John, Tandragee,	1	1	0			
Idrone Farming Society, County Carlow,	10	0	0			
Inistioge Farming Society, County Kilkenny,				10	0	0
Irish Society, the Hon., London,	30	0	0	10	0	0
Irwin, Crommelin, Newgrove, Belfast,	1	1	0			
Irwin, J. R., Carnagh, Keady,	1	1	0			
Jackson, F., Inane, Roscrea,	1	1	0			
Jackson, Thomas, Workington,	1	0	0			
Jackson, Thomas, Belfast,				1	1	0
Jaffe, Brothers, Hamburgh,	1	1	0			
Jamieson, Henry, Clonmel,				1	0	0
Johnston, Joseph, Knappagh, Armagh,	1	0	0			
Johnston, John, Moy,	1	1	0			
Jones, John, Templeranney, Arklow,	1	1	0			
Jones, Lewis G., Wood-Hill, Dromore West,	1	1	0			
Jones, Miss, Kilwaughter-Castle, Larne,	2	2	0			
Jones, Major, Drumard, County Leitrim,	1	1	0			
Kavenagh, Lady Harriet, Kilkenny,	1	0	0			
Kavanagh, J. B., Newtownlimavady,	1	1	0			
Kay, James, & Son, Manchester,	57	10	0			
Kennedy, James, & Sons, Belfast,	34	4	0	2	2	0
Ker, David S., M.P., Montalto,	5	0	0	5	0	0
Kilkenny Branch,				10	0	0
King, Henry, Dungiven,	3	3	0			
Kingston, A. C., Longford,	1	1	0			

	1841 to 1849.			1850.		
Kinmond, Peter, Dundee,	£1	0	0			
Kinmond & Hill, Dundee,	1	0	0			
Kirk, William, Annvale, Keady,	5	0	0			
Kirkpatrick, Dr., Dublin,	1	1	0	£1	1	0
Kirwan, Denis, Castlehacket, Tuam,	1	1	0	1	1	0
Knox, J. & W., Kilbirnie, Ayr,	1	0	0			
Lancey, Capt., Newtownlimavady,	1	1	0			
Landall, D., & Co., Kirkcaldy,	1	1	0			
Lansdowne, Marquis of,				10	0	0
Larne Farming Society,	10	0	0			
Lascelles, Rev. R. P.,	1	1	0			
Law, Samuel, Banbridge,	27	10	0	1	1	0
Leadbetter, John, & Co., Belfast,				2	2	0
Leadbetter, Adamson, & Co., Blairgowrie,	2	0	0			
Leathem, J. & W., Derry,	10	0	0			
Lee & M'Kinstry, Armagh,	1	1	0			
Ledlie, George,	1	1	0			
Leinster, Duke of,	35	0	0			
Leslie, Edmund, Donaghadee,	3	3	0			
Leslie, Mrs. W., Donaghadee,	1	1	0			
Leslie, Charles Powell, M.P., Glasslough,	45	0	0			
Leslie, Rev. E., Anahilt,	3	3	0			
Lewis, A. G., Monaghan,	1	1	0			
Lindsay, David, Ashfield, Dromore,	3	3	0			
Littledale, A. H., Bolton-Hall, Lancashire,	1	1	0			
Lloyd, R.,	1	1	0			
Londonderry Farming Society,	25	0	0			
Londonderry, Marquis of,	25	0	0			
Louth Farming Society,				15	0	0
Lowry, Joseph, Belfast,	2	2	0			
Lowson, Andrew, Arbroath,	4	0	0			
Lucan, Earl of, Castlebar,	10	0	0			
Lucas, Edward, Dublin,				1	1	0
Lurgan, the late Lord,	145	5	0			
Macartney, George, Lissanoure-Castle,	25	0	0			
Macaulay, Patrick, Randalstown,	25	9	0			
Magill, S. R., Cookstown,	1	1	0			
Malcolm, James, Lurgan,	4	4	0	1	1	0
Malcolm, A. G., Kirkcaldy,	1	1	0			
Mann, Alexander, & Son, Arbroath,	4	0	0			
Marley, Gabriel, London,	1	0	0			
Martin, John, Jun., Killileagh,	34	0	0			
Marshall & Co., Leeds,	205	10	0	10	0	0
Mathew, John, Rathcloheen, Cashel,	2	2	0			
Matthew, Very Rev. Theobald, Cork,	2	2	0			
Maxwell, J. W., Finnebrogue, County Down,	10	0	0			

	1841 to 1849.			1850.		
Meade, Hon. General, London, ...	£25	0	0	£5	0	0
Mercers' Company, London, ...	80	0	0	5	0	0
Middleton Union Farming Society, County Cork, ...	15	0	0			
Metcalfe, J. & W., Pateley-Bridge, Ripon,... ...	2	2	0			
Millar, Alexander, Ballycastle, ...	2	2	0			
Millar, Rowley, Moneymore, ...	1	1	0			
Milne, Cruden, & Co., Aberdeen, ...	25	0	0			
Molony, James, Kiltanon, Clare, ...	2	2	0			
Moore, W. J., Ligoneil, Belfast, ...	5	0	0			
Monaghan Branch, ...	15	0	0			
Monkstown Spinning Company, Whitehouse, ...	31	14	0	2	2	0
Monsell, Wm., M.P., Tervoe, Limerick, ...	2	0	0			
Monteagle, Lord, ...	15	0	0			
Montgomery, James, & Son, Belfast, ...	24	0	0	2	2	0
Moore, James, Moorefort, County Antrim, ...	3	0	0			
Moore, J. S., Ballydivity, County Antrim, ...	5	0	0			
Moore, Samson, Ballynacree, County Antrim, ...	5	0	0			
Moore, Henry, Barne, County Carlow, ...				1	0	0
Morfit, John, Leeds, ...	14	14	0	3	8	0
Mortimer, R., Carrick-on-Shannon, ...	3	3	0			
Mulhollands, Belfast, ...	100	0	0			
Mulholland, A., & Son, Belfast, ...	146	13	0	10	0	0
Mulholland, S. K., & Hinds, Belfast, ...	139	6	0	10	0	0
Mulholland, William, Belfast, ...	2	10	0			
Munn, John, Jun., Londonderry, ...	28	0	0			
Murdoch, William, Monaghan, ...	1	1	0			
Murland, James, Castlewellan, ...	96	0	0			
Murphy, John, & Co., Linfield, Belfast, ...	17	10	0			
Macoun, John, Kilmore, ...	1	0	0			
M'Adam, Curell, & Co., Belfast, ...	9	4	0	2	2	0
M'Cartan, John, Waringstown, ...	3	3	0	1	1	0
M'Causland, Marcus, Newtownlemavady, ...	5	0	0			
M'Clelland, James, Banville, ...	1	1	0			
M'Clure, Alexander, ...	1	1	0			
M'Donald, A., & Co., Kirkcaldy, ...	1	0	0			
M'Donnell, Edmund, Glenarm-Castle, ...	6	6	0	2	2	0
M'Garrel, Charles, Magheramorne, ...	2	2	0			
M'Gaw, William, ...	1	0	0			
M'Gildowney, John, Ballycastle, ...	1	1	0			
M'Kee, John, Keady, ...	1	1	0			
M'Kenzie, Alexander, ...	1	1	0			
M'Kibbin, Robert, M.D., Ballymacarrett, ...	29	0	0	2	2	0
M'Murray, George, & Co., Waringstown, ...	2	10	0			
M'Murray, Thomas, & Co., Dromore, ...	12	12	0	2	2	0
M'Naghten, Sir F. W., Bart., Bushmills, ...	10	0	0			
M'Naghten, Sir E. C. W., Bart., Bushmills, ...	1	1	0			

	1841 to 1849.			1850.		
M'Naghten, Bartholomew, Ballyboggy, Coleraine,	£3	3	0	£1	1	0
M'Neece, Rev. T.,	1	1	0			
M'Neile, John, Parkmount, Belfast,	9	9	0	1	1	0
M'Watty, James, Castleblayney,	1	1	0			
Nesbitt, John, London,	5	0	0			
Newry & Morne, Viscount, M.P., Rostrevor,	21	1	0	1	1	0
Newton, Philip J., Dunleckney, Carlow,	3	0	0			
Nicholson, George, Donaclony,	1	0	0			
Nicholson, John, New York,	1	1	0	1	1	0
Nicholson, William, Donacloney,	1	1	0			
Nicholson, Robert, Donacloney	1	1	0			
Niven, Richard, Lambeg,	7	7	0	1	1	0
Norris, John, Camowen, Omagh,				1	1	0
Nugent, Colonel, Portaferry,	15	0	0			
O'Brien, W. Smith, M.P., Cahirmoyle,	1	1	0			
Ogilby, Sir John, Bart., Baldovan, Perthshire,	1	1	0			
Oliver, William, Spring-Lodge, Kilfinane,	1	1	0			
Orr, Andrew,	1	1	0			
Orr, W., & Sons, Armagh,	1	1	0			
Palmerston, Viscount,				1	1	0
Parker, Preston, & Co., Belfast,	5	0	0			
Paton, J. & G., Montrose,	10	5	0			
Patrick, John, & Sons, Ballymena,	3	3	0	1	1	0
Patton, William, Armagh,	1	1	0			
Peel, Right Hon. Sir R., Bart.,	25	0	0			
Phibbs, William, Seafield, Sligo,				1	1	0
Pike, Jonathan, Coalisland,	1	1	0			
Pirrie, William, Belfast,	1	1	0			
Porter, H. J., Tandragee,	1	0	0			
Porter, Rev. J. G., Lisbellaw, Enniskillen,	1	0	0			
Porter, John G., Kilskeery, Trillick,	1	0	0			
Powerscourt, Viscount, Representatives of,	20	0	0			
Prentice, H. L., Caledon,	5	5	0	1	1	0
Price, James, Saintfield,	6	6	0	2	2	0
Price, Nicholas, Saintfield,	15	0	0			
Price, Sir Charles, & Co., London,	10	0	0			
Primate, the Lord, Armagh,	20	0	0			
Provincial Bank of Ireland,	20	0	0			
Quarell, Francis, London,	1	0	0			
Quinn, Peter, Dromore-House,	1	1	0			
Quinn, James, Dromore-House,	1	1	0			
Ram, Stephen, Ramsfort, Wexford,	1	0	0			
Ranfurley, Earl of,	35	0	0	5	0	0
Renny, Sons, & Co., Arbroath,	4	7	0			
Renshaw, W., & Co., Manchester,	6	6	0	2	2	0
Reilly, J. T., Scarva, Loughbrickland,	7	2	0	1	1	0

	1841 to 1849.			1850.		
Richards & Co., Aberdeen,	£26	0	0			
Richardson, Brothers, & Co., Belfast,	69	4	0	£2	2	0
Richardson, J. N., Sons, & Owden, Belfast,	92	10	0	5	0	0
Richardson & Co., Lambeg,	53	15	0	5	0	0
Richardson, Samuel, & Co., Lisburn,	30	0	0			
Richardson, Jonathan J., Lisburn,	4	4	0	2	2	0
Richardson, Miss, Rich-hill,	10	10	0	2	2	0
Richardson, J. & T., & Co., Springfield,	6	6	0	1	1	0
Richardson, H., Somerset, Coleraine,	6	6	0			
Roberts, John, Collin, Lisburn,	3	3	0	1	1	0
Roche, E. Burke, M.P., County Cork,				5	0	0
Rollo, R., Moyfort, Ballina,				1	0	0
Roddy, Robert, Belfast,	3	3	0	1	1	0
Roden, Earl of,	10	0	0			
Roscrea Branch,				10	0	0
Ross, D. R., M.P., Rostrevor,	10	0	0			
Rossmore, Lord,	5	0	0			
Rowan, Major, Merville, Carrickfergus,	7	7	0	1		0
Russell, James, Dunlewey, County Donegall,	2	2	0			
Russell, Matthew, Newry,	1	1	0			
Rutherford & Co., Dunfermline,	2	2	0			
Savage, John, Belfast,				1	1	0
Sadler, Fenton, & Co., Belfast,	4	4	0	2	2	0
Sadler, Samuel, & Co., London,	1	0	0			
St. Leger, Hon. A. B., Adare, Limerick,	2	2	0			
Salters' Company, London,	10	10	0			
Saunders, R. F., Baltinglass,	1	1	0			
Saunders, Miss, Fortgranite, Baltinglass,	1	1	0			
Scott, Major, Willsb'ro', Derry,	1	1	0			
Seaver, Captain, Heath-Hall, Newry,	10	0	0			
Shaw & Houghton, Celebridge,	62	10	0			
Shaw, Joseph, Templemills,	42	10	0			
Shaw & Beale, Bath,	1	0	0			
Shaw, Edward, & Co., Belfast,	20	0	0	2	2	0
Shuldham, Lieutenant-General, Dunmanway,	2	2	0			
Simms, William, Belfast,	3	3	0	1	1	0
Simpson, John,	1	0	0			
Skibbereen Branch, County Cork,	15	0	0			
Skinner, C. G. M'G., Dundrum,	1	1	0	1	1	0
Sligo, Marquis of,	10	0	0			
Sligo Branch,	10	0	0			
Smyth, John, & Co., Banbridge,	29	4	0			
Spencer, Lawrence, & Co., Preston,	2	2	0			
Staples, Sir Thomas, Bart., Lissan, Co. Tyrone,	5	0	0			
Staples, Edmund, Queen's County,				1	1	0
Stevenson, J. & W., Roan Mills, Dungannon,	6	5	0			

	1841 to 1849.			1850.		
Stewart & M'Clelland, Ligoneil,	£99	19	2			
Stewart & Savage, Lisburn,	22	10	0			
Storar, T., & Co., London,	15	9	0	£2	2	0
Stoney, Isaac, Gilford,	1	0	0			
Story, A., Carrick, County Fermanagh,	1	1	0			
Stronge, Sir J. M., Bart., Tynan-Abbey, Armagh,	14	14	0	2	2	0
Stuart de Decies, Lord,	5	0	0			
Sullivan, John, Kinsale,	1	1	0			
Swan, P. D., Kirkcaldy,	5	0	0			
Symes, William, Ballina,				1	1	0
Taylor, Hon. and Rev. E., Ardgillan,	5	0	0			
Templetown, Viscount,	70	0	0			
Tennent, Robert James, M.P., Belfast,	4	4	0	1	1	0
Tennent, J. Thomson, Belfast,	7	7	0			
Tenison, E. K., M.P., Kilronan-Castle,	1	1	0			
Tenison, Lady Louisa, Kilronan-Castle,	1	1	0			
Thompson, Robert, & Co., Wolf-Hill,	98	15	0			
Thomson, John, Lowwood, Belfast,	1	1	0			
Tirkeeran Farming Society, County Derry,	25	0	0			
Trail, William, Ballylough, Bushmills,	4	4	0			
Trinity College, Dublin,	10	0	0			
Tullamore Branch, County Westmeath,				10	0	0
Verner, Sir W., Bart., M.P., Churchhill, Moy,	40	0	0	5	0	0
Vesey, Samuel, Derrabard, Fintona,	2	2	0			
Waithman & Co., Yealand, Lancashire,	5	0	0			
Walker, Mark, Leeds,	4	0	0			
Walker, William, Carrickfergus,	15	0	0			
Walker, R. & S., Tullygirvan,	8	7	0	1	1	0
Waller, Rev. Dr., Pallaskenry, Limerick,	2	0	0			
Warren, Rev. J. C. B., Horkesley-Hall, Essex,	1	0	0			
Waring, Richard, Newry,	1	1	0			
Wandesforde, J. B., Castlecomer,	1	1	0			
Waterford, Marquis of,	50	0	0	5	0	0
Waterford Branch,				10	0	0
Watson, James, Brookhill,	14	14	0	2	2	0
Watson, R., & Sons, Lurgan,	3	3	0	1	1	0
Waugh, Henry, Banbridge,	1	1	0			
Wexford Union Agricultural Society,				10	0	0
White, William, Newton-Lodge, Sligo,	1	1	0			
Wiggins, Henry, Muff, County Derry,	6	0	0			
Wilks, John, London,	2	0	0			
Wilkinson & Co., Leeds,	40	1	0			
Willis, Henry H., & Co., London,	1	1	0			
Wilson, John, & Sons, Whitehaven,	1	0	0			
Wilson, D. J., Belvoir, County Clare,	1	1	0			
Wittkowsky, Querfeldt, & Co., Riga,	5	0	0			

	1841 to 1849.			1850.		
Wynne, John, Hazlewood, Sligo,	£1	1	0	£1	1	0
Woods, Charles, Moy,	1	1	0			
Wolsey, John, Portadown,	1	1	0			
Watts, Samuel, Lurgan,	1	1	0			
Young, John, & Co., Ballymena,	2	2	0	1	1	0

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